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TO CO-WORKERS AND SUBSCRIBERS.—We owe a debt of lasting gratitude for the promptness with which they have responded to our prospectus for 1852, by sending in such a cataract of names for the new volume. Besides thousands of old subscriptions renewed, new ones are coming from every quarter in clubs of five, ten, thirty, and some run up to one hundred and more. The good time truly appears to be "coming," for the universal spread of Phrenology. There is still room on our subscription books for more.

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EDUCATION,

PHRENOLOGICALLY CONSIDERED.

NUMBER II.

SECRETIVENESS is one of the animal propensities, and in its action has merely selfish gratification in view. In the lower animals it acts, like all their other faculties, as a blind instinct, while in man it is coupled with reasoning power and moral sentiment, by which it may be guided, modified, and restrained, or allowed to act only in harmony with the higher dictates of the mind. The very name of Secretiveness indicates the general nature of the faculty, yet we deem it proper to define its office, its perversion and its abuse.

Its office is to produce concealment, and a restraining influence upon the other faculties. Its true animal nature perhaps may be best understood by reference to its action in the lower order of animals. Nearly all carnivorous animals have Secretiveness in a high degree of power. The cat species, from the lion downward, secretes itself and patiently waits and watches for its prey, and when it approaches, seizes it at a single bound, before the unconscious victim is aware of the presence of the concealed enemy.

Herbivorous animals, on the contrary, whose natural food does not flee at their approach, and who, therefore, need no artifice to surprise it, are usually found comparatively deficient, not only in the development of the organ, but in the manifestation of the propensity under consideration.

There are those of the human race in whom Secretiveness is so large and active, that their whole character is tinged with a fox-like, or cat-like cunning. All they say, and all they do, has an air of mystery, concealment, and artifice about it: they use ambiguous expressions, and never "speak right on," bold, plain, and unmistakeable, but qualify their remarks with prudential terms; and hedge about all they say with so many conditions, that they appear as if they were either cowards, or considered themselves holding communion with rascals. There are others, on the contrary, who are too abrupt, blunt, and ill-timed in their remarks—who lack sufficient concealment for a judicious character, and who, as Shakspeare expresses it, "carry their heart on their sleeve for daws to peck at." We can tolerate a plain, bold character, better than a sly and crafty one, yet neither is the proper standard of character; a medium between the two extremes should be sought. This involves a full development of the organ, and that in harmony with all the others. The training of this faculty is of essential importance—where it is too small it should be developed, and where too large, it should be depressed. All well balanced minds will discover the propriety of this as the true mode of training. Let children be taught to restrain their feelings, to never express a sentiment, till they have reflected upon the propriety or impropriety of what they would utter. Oftentimes an expressed truth might wound the feelings of some persons present, or might develop to the world that which should be kept in a small circle of friends as a secret. They should be taught not to unnecessarily expose their

weaknesses, or their ignorance, and also never to so far develop their character that dishonest strangers might take advantage of it. This is in accordance with Conscientiousness itself, and both faculties may be trained in harmonious conjunction on this point. Every faculty, this among the number, is given to man for a wise and useful purpose. Each faculty, by being too weak, creates a weakness in the character, while excessive development of any faculty, produces an unbalanced state of mind, and, in respect to nearly every one of the primitive powers has a liability to abuse from excessive development, or undue activity. This is even true of Benevolence or Conscientiousness; making a man so liberal as to do himself injustice—so charitable as to give, to unworthy objects; or so sensitive in respect to moral duty and responsibility as to do nothing, for fear of doing wrong. Deficient Secretiveness makes a man so transparent as to be liable, at every moment, to fall a victim to the selfishness of those around him; while an excess of this faculty leads to duplicity, chicanery, cunning, artifice, dissimulation and falsehood; indeed there are those whose chief pleasure seems to be to deceive and mislead, not only to hide their real character and sentiments, but to put forth language and actions of a deceptive nature, quite foreign to their general characters, for the mere pleasure of the good cheer and amusement it affords, thus making an honest man appear, for the time being, to be a hypocritical villain.

It creates in writers or speakers a tendency to shroud in mystery, not only what is attempted to be expressed, but to make us believe, that much of importance is yet to come; hence, novelists, who usually have the organ large, develop a previous plot on one page only to lay another, or to raise a mystery to be afterwards developed. Thus they go on linking mystery in mystery, to excite interest and lead the reader on, and frequently close their book in a labyrinth of undeveloped history, more especially if another volume is to follow.

The abuses of this faculty in social life are numerous; children are deceived from the very cradle, nay, before they cease to inhabit it are they taught hypocrisy.

It is thought by mothers and nurses, that a straight-forward, truthful course with a child is not good policy; that they must be ruled by deception. Soon they learn one deception, but are not conscious that they are not involved in others, and they are not long in gaining the knowledge that deception and double dealing is almost the only mode of producing influence on their minds. They soon begin to deceive their playmates, next their parents, and not being educated properly relative to truth, but on the contrary, trained by a system of hypocrisy, they soon learn to lie outright. Mothers in whom Secretiveness is so large as to lead them to deceive their children, have usually transmitted to those children a large share of that faculty. Instead of developing unduly in the children an already large organ, it is the part of wisdom to check and restrain it.

Servants are taught openly to say their mistress "is not at home," if the company should not be of the favored few; and is it strange that such servants, under such training, are ultimately accused of falsehood on their own account? Often are they discharged for practicing, for themselves, the very deceptions which they have been compelled to practice for their mistress, or lose their situation for disobedience.

We are told that "servants lie so that they cannot be trusted." It would be strange, indeed, were it otherwise. It would be a marvel if those who have to depend upon obedience for their daily bread, and are *required to practice deception, as a part of their duty, should not soon learn to deceive and lie to screen their faults*, or minister to their own interests. Nor are they always, or ordinarily, persons of a high deg reeof moral culture.

We will neither take the time nor the space to enumerate instances of social deception, which are every day being practiced in communities denominated Christan and cultivated. It is enough merely to allude to the blandishments and flatteries of people, when visitors call, as, "I am delighted to see you, do stay longer—stay to tea;' and when the company, apparently, though often hypocritically, force themselves away, the mother, in the presence of her children who look up to her for example, says—"I am glad they they are gone, they are very disagreeable people. Why do they come to annoy one?" *At such* bald hypocrisy unsophisticated childhood looks with astonishment, and is bewildered at the inconsistency, but soon learns that it is living in our atmosphere of deception, and begins to practice accordingly.

In our last article we promised to refer to the perversion of Secretiveness, in connection with Acquisitiveness, as applicable to the customs of trade and commerce.

The merchant, who ought to be a man of acknowledged truth and integrity, and who would turn a man into the street who should charge him with the contrary, lives in the very hot-bed of deception; not necessarily so, but nevertheless, the intrigues and deceptions of cunning sharpers have created a public sentiment in mercantile life, which makes it almost impossible to be a straight-forward, truthful man, and succeed. The mining and countermining, the plotting and counter-plotting, has become so general that mercantile life is a net-work of deception; and the very goods on the shelves are made to speak falsehood by the yard. Is it not frequently demanded of clerks to practice deception, and falsify with a brazen face, or lose their places? To such an extent has this state of facts obtained, that it would seem that men lock up their conscience, if they have one, at home, and go into the *world, practicing diplomatic hypocrisy* in their business, and habitually concealing the bad policy of dishonest commerce with a lie. It must be remembered, though the object be gained, and the means to obtain it are a sharpened intellect, and excessive Secretiveness, they must not only conceal the truth, but put forth either directly or indirectly, what is positively false. Who has not heard the jockey's motto—"A man's eyes must be his chap"—"you must judge for yourself, and act accordingly." Who ever puts the poorer part of an article in sight? Who does not conceal defects in their goods and magnify perfections; or, if defects are discovered, reason away their full effects.

But Secretiveness and Acquisitiveness seem banded together to work iniquity, and not in mercantile life merely, where private letter-marks are used, and where cotton is intentionally sold for silk and worsted, but the abuses of these faculties are found among manufacturers. Almost all wares are embodied cheats, whitened sepulchres, polished on the surface, vencered without, but shabby within.

To take an example—a certain manufacturer of flannels substituted cotton-warp for the woolen; stored his goods till he had expended a large sum of money in their manufacture, and then rushed them into the market. They were beautiful—the deception was not apparent, and before the cheat was known to the consumer, the manufac-

turer had realized half a splendid fortune by the operation; because the cotton-warp, the more difficult part of the fabric, cost less than the sixth part of what the real article would have cost. As soon, however, as the consumer became aware that it was half cotton, he began to inspect everything in the shape of white flannel, before purchasing, to detect the cotton; but the shrewd manufacturer had anticipated all this, and made a large quantity of goods, not with cotton-warp and woolen filling, but by mixing in equal parts the cotton and the wool in the fibre, by carding it together, so that throughout the entire fabric, the warp and filling both, the cotton was covertly intermixed. Thus each thread, if it were broken, and held up to the light or scorched, would indicate the presence of wool. This deception could not easily be detected unless the cloth was colored red, when the cotton fibers not taking color in a wool-dye, would give a gray appearance to the goods. Before the detection of this cheat became general, so as to put people on their guard, the other half of a splendid fortune had been realized by this new deception, so that the manufacturer could retire from business at forty years of age, with a cool hundred thousand or two, and live in splendid style. He then could roll in his carriage, by the common masses, whose earnings, in the purchase of his hypocritical goods, had contributed to swell his purse. Now, he teaches his sons and daughters, that their position elevates them above the rest of mankind, from whose purses his own wealth has in the main been drawn, by his lying goods, his incarnated falsehoods.

This is a specimen of the state of facts which pervades trade and manufactures to a great extent, from a cargo of cast-iron axes, to a gilded watch, and its vendor, the mock auctioneer.

Men make themselves merry over wooden nutmegs, horn gun-flints, white-oak cheese, and wooden hams, each of which may have been constructed, and sold, as a mere playful deception, for the sport of the thing; but wooden nutmegs, in sober verity, are found in the marts of trade and manufactures, so generally, indeed, that if every falsehood incorporated into manufactured goods could stand forth, there would be such a rustling among the wares and fabrics in the warehouses as would frighten even those who have contributed to their existence.

This system of duplicity, this perverted Secretiveness, exercised for the gratification of Acquisitiveness, is not confined to trade and manufactures, to pedlars and mock auctioneers; but it extends even among farmers, who are supposed to be farthest removed from temptation, and perhaps, by circumstances, the most honest portion of community. The craving desire to gratify the love of money induces the farmer to invoke Secretiveness and the spirit of deception, to enable him the more successfully and rapidly to feather his own nest.

Go out into the country, for example, to purchase a superior cow, and call on one of the honest sons of the soil, and it would not be *very* difficult to find a man who would show himself as cunning and as selfish as any trader or manufacturer. Let us illustrate such an interview by a colloquy between a CITIZEN and a FARMER, and we beg of the reader to watch the workings of Secretiveness to gratify Acquisitiveness.

CITIZEN.—"I am in pursuit of a fine cow, and understanding, at the hotel, that you kept a large flock of very excellent ones, I have called to look at them, and to see if I could make a purchase to please me. I am not very particular as to price, so I but obtain one of the very best."

FARMER.—"Well, yes, I have a large flock, and they have the reputation of being excellent. They have cost me much care and pains in their selection; but I can't say as I wish to sell any of them. When a man has a good article which he wants to use, it is not well to dispose of it."

C.—"True; but I would like to look at them."

F.—"Oh, certainly, I will show them with pleasure; but, understand, I don't promise to sell one at *any* price."

They go to the farm-yard, and a little son of the farmer follows to see and hear, and in doing so, takes his first lesson in the tricks of trade; for, be it remembered, that every act of the parent stamps its impress upon the young mind, which becomes almost ineffaceable.

C.—(Scanning a lean, common-looking animal, which, by the way, was one of the best milkers in the flock, and low in flesh from her milking qualities, yet it was in early winter when those qualities wou d not be apparent.) "What is that cow worth?"

F.—"I suppose about twenty-five dollars."

On an elevated place stands a large, fleshy, noble-looking cow, the poorest milker of the whole, and fat because her food went to flesh rather than to milk—catches the admiring eye of the inexperienced citizen, and he eagerly inquires, "What will you sell that one for?"

F.—"O, don't say anything to me about *that* cow; she is a very *peculiar* one, and more than that, she belongs to my *wife*. I told you I did not care to sell *any*, and *this* one I should hardly expect to sell at all; besides, I should not like to have my wife offended by selling a *favorite* of hers. "John, (turning to his boy, who is surprised to see his father hesitate a moment about selling this miserable, vicious, unruly beast, whose small mess of milk is as thin and blue as that sold by Messrs. Croton, Pump & Co., in New York,") John, mother will be in our hair if we sell "old Fill-pail."

That name strikes the buyer's ear just as it was intended to do, and he presses the farmer for a price.

F.—"I will not say I will sell her at any price, *unless my wife will consent.* I don't believe in family quarrels."

The boy, John, is surprised at his father's reluctance to sell, and entertains not the slightest doubt but what his mother will joyously consent to the sale. The stranger is determined to have a price, and finally, the obliging farmer says—"Now, mind I don't agree to sell at any price without my wife's consent, and I will set such a price as will, doubtless, cool your ardor without the necessity of calling my wife. Forty dollars is the price."

C.—"Suppose we consult the good lady, and see what she will say. If she will consent, I will take the animal."

F.—"I know what she will say, and if you insist upon it, we will refer it to her."

They proceed to the house, the farmer taking the lead to get the first word; and the boy, following anxious to have his mother assent to the sale and urge the bargain.

F.—"Well, mother, this gentleman is very anxious to buy 'old Fill-pail,' and I told him"—"Yes," interrupted the wife in apparent anger, "and you '*told him*' he might have her, I warrant; it is just like you to sell the best cow we have. Well, do as you like. We might as well give up trying to make butter and cheese altogether."

With a red face and an angry air, she

leaves the room, slamming the door after her. "There," says the Farmer, "I knew just how it would be."

John, the honest boy, was astonished. He had heard that cow made the subject of censure for years by all the family; and now, when a double price is offered for her, his father holds back, and his mother gets angry. He don't understand it. No, indeed, poor boy, you *don't understand it*, but you are in a fair way of doing so. Wait a little and you will be wise, and know more of the world.

The stranger takes the bait, counts out the forty dollars, and the farmer apparently draws back from it, saying, "I don't think *I ought to take the money. You had better not take the cow.*" (All true, though not intended to be so regarded.)

He takes the money, and the stranger departs with his purchase. The mother returns, smiling like a summer's morning. The father, chuckling over his money, says, with an arch wink to his wife, "I think when he has had that cow half as long as we have, he will be glad to take less than half what he paid for her."

This unriddles to the boy's unsophisticated mind the hypocrisy of the whole transaction, and he shrinks back from his parents as scheming liars. To him it looks like robbery to take twenty-five dollars more for the cow than she was worth; and like lying, thus to deceive the stranger by such back-handed means.

He has been whipped for lying, and taught that he must be honest; and he can see no difference between talking a lie and acting it.

Under the influence of filial love he begins to reason, and is unwilling to condemn his parents to the degradation of liars and robbers. He reviews the guarded modes of expression by the father and mother. His father did not say it *was* the best cow in the flock, and told the man he "*had better not take* the animal"—that he "would not sell her unless his mother would *consent* to it." It was not exactly lying after all. Besides, his father stood high in society; he was called, Colonel, and Esq.; had been a Representative; was a trustee of the Religious Society, school committee, and everybody looked up to him as a man of honor. His mother, too, was intimate in the family of the minister, and had the best company in town. Therefore they were good people, and their example worthy of imitation. Full of this pleasing unction to his outraged conscience, and possessing withal, by hereditary transmission, a similar tendency to shrewdness and money-loving as that of his parents, he began to meditate a method of profiting by this his first lesson in keen business management. "Why can't I sell that soft, worthless new knife I bought of the rascally pedlar the other day, in the same manner that father sold the cow? Let me see, I have the plan, and I will have the money, and I won't tell a lie either. I can steer clear of that."

He carefully whets his knife, and as carefully pockets a soft stick, and then with a veil of honest looks proceeds to school. At recess, he very carelessly draws forth his knife and stick, and begins to whittle. It cuts finely. The boys flock around, eager to see it, and to learn what he paid for it. "I got it cheap—only twenty-five cents—see it cut."

"I'll give you twenty-five," says one.

"I guess you will," says John, "after I have run the risk of getting a bad one, and proved it. See it cut."

"I'll give you thirty."

"I'll give you forty," says another; "and here's the money." Forty, being a golden number in the ear of John, he quietly pockets the money just as the school bell rings, and they all go in to their books—John, to rejoice in the success of his experiment; and Charley, to anticipate the pleasure his excellent cutting knife will afford him.

As soon as the school is dismissed—while Charley is hunting for a good hard stick to show the other boys how gloriously it will cut—John makes all haste for home, to announce his success, and to bank his money. Almost out of breath he enters the house exclaiming, "Father, I have sold that pewter-faced knife which I bought of the pedlar at twenty-five cents, *for forty cents.*" "Ah! have you? But how did you manage? You didn't tell a lie, did you, Johnny? You must never lie you know." "Oh, no, sir, I sharpened it very nicely—took a soft stick in my pocket, and kept whittling—said nothing, and let them bid."

"But who bought it? and have you got your money?"

"Charley Sumner, who always has money, bought it, and here are the forty cents."

"That's right; you should never lie, and always get your pay down to prevent after trouble. I say, mother! Johnny is pretty smart. We must make a merchant of him, eh—what think you?"

"Well, he *has* done well with the knife surely, and I always thought he would be somebody, and get rich; besides, Charley is better able to pay a high price for a poor knife than Johnny. Bring the money to me, my son, I will save it for you."

This is lesson, number *two*, and the boy, from this propitious beginning, kept practicing until he was old enough to enter a store as clerk. His father kept him short of change for his new situation, and desiring to appear well with his associates, he began by borrowing small sums from the money-drawer, designing to pay it out of the first remittance. But the economical father desiring to keep him short, to teach him economy, neglected the penurious remittance until the boy had secretly borrowed the full amount of what he received from his father, and he cannot pay it then; and finally, after some struggles with his defaced Conscientiousness, and urged by his necessities, decided not to pay it *at all.*

He went on in this way, borrowing, and never paying, until he robbed his master of a large amount, and ended his life a villain.

His parents pocketed a few extra dollars for a cow, by means of circuitous falsehood—their son imbibed the education, and that education shaped his future.

Who will say, "Go thou and do likewise?"

LOUIS J. M. DAGUERRE,

HIS CHARACTER AND BIOGRAPHY.

Who, in the wide range of civilization, has not heard of the Daguerreotype? Where can we go, from the rich mansions of wealth in our cities to the rude log-cabin in the new settlements in the far West, that the image of the "human face divine" is not found enstamped on imperishable silver by this wonderful art, Daguerreotype. It has, however, almost ceased to be regarded as a wonder, and yet it is, nevertheless, as bold a step in art as has blessed the world since the art of printing. To fix the portrait of a man or a child, or an entire senate, or congregation, in all their nicer lineaments, more clearly and delicately than could ever be done by the most elaborate and costly engraving—nay,

more, to take all the minutiæ of the most elaborate pile of architecture without leaving out a virtue or a blemish—indeed to copy an entire landscape, its every shrub, twig, rock, and even the eternal cataract of Niagara, or the bleakest cloud-smitten mountain, and all within the space of a few seconds, and fix them forever on durable silver, is to us as much of a marvel, to-day, as it was when it was first promulgated to the world some thirteen years ago. True, we know thoroughly the process, the *modus operandi* of man's agency in the matter, yet, precisely how it is that the rays of light so act upon the chemical substances on the silver plate, as to produce a durable picture of whatever is reflected upon it, we do not fully comprehend.

We are here strongly tempted to give our readers the process and philosophy of this great art, so far as it is understood: but it would be wandering from our present object, viz., a sketch of its inventor. We will give, in a future number, an illustrated article on this interesting subject.

Daguerreotype is one of the great improvements of the age. It cheapens the production of portraits, and is thereby a great social advantage. If a friend wishes, he can with a dollar, and ten minutes' time, procure a perfect miniature that may be sent by mail to any part of the world. If a friend dies without leaving a portrait, the Daguerrean is called, and he, in a moment, takes the sleeping features of the deceased loved one, and before the hour of the funeral arrives can copy it for fifty of the mourners, each of whom can carry to their home a perfect image of the departed.

Since the discovery of this art, pictures of all kinds, portraits of the human face—of rare and valuable animals—copies of machines, works of art, buildings, as specimens of architecture, for the edification and instruction of the million have been multiplied a thousand fold; and now a magazine, and almost a common newspaper, must be "pictorial" to meet the demand of the age. If a great man, or an eminent woman, appears among us—a rare painting, an elegant statue, a noble edifice, or splendid ship, is introduced, in which, the whole people are interested, and which few can see, Daguerreotype seizes the image in an instant, and in a week it is transferred, by the aid of the engraver and the printer, to a million copies of periodicals, and is being borne to fifty million of eager eyes

LOUIS JAQUES MAUDE DAGUERRE.

throughout a continent, with the fleetness of that other wonder of the age, the locomotive.

No mode of teaching is so effectual as the pictorial, and no discovery has ministered so much to the increase of this species of teaching as the art in question. It speaks directly to the eye, and impresses the thought in bodily form upon twenty of the faculties, while without this mode, the imagination must draw the picture which words may lamely describe.

This fact will make the name of Daguerre* immortal, for it is attached to the art he has given to the world.

In the portrait of this illustrious artist, what particularly attracts the notice of the Phrenologist is the firmness and compactness of his general organization, giving intensity of thought, and patient, penetrating effort to his mind. His forehead was very broad and prominent at the base in the region of the organs of Perception and Memory. If ever there was a head qualified for scientific investigation and experiment, this is one. How prominent across the brows; how large at Order; how broad between the eyes, showing large Form, Size, and Individuality: how full in the center and upper part of the forehead in the region of Eventuality and Comparison; how very broad at Constructiveness through the temples. He would have excelled in engineering, Architecture, or in any of the Natural Sciences. From the fact that Daguerre was always very much averse to sitting for his own picture, there are but few photographs of him in existence. The one from which our excellent engraving of him is copied, was taken in Paris by Messrs. Meade and Brother, of this city, to whose kindness we are indebted for the privilege of copying not a few of their excellent pictures.

The following interesting remarks respecting the labors of Daguerre we copy from a recent number of the *International Magazine*:—

Louis Jacques Maude Daguerre, whose name is for ever associated with the photographic process, of which he was the discoverer, died July 10th, 1851, in Paris, in the sixty-second year of his age. He was a man of extreme modesty and great personal worth, and was devoted to art. He was favorably known to the world before the announcement of his discovery of the Daguerreotype. His attempts to improve panoramic painting, and the production of dioramic effects, were crowned with the most eminent success. Among his pictures, which attracted much attention at the time of their exhibition, were, The Midnight Mass, Land-slip in

* De-gare, hence De-gare-o-type. This is the usual English pronunciation among artists. Webster pronounces it Da-ger-ro-type, but this is, we think, less correct, according to present usage.

the Valley of Goldau, The Temple of Solomon, and The Cathedral of Sainte Marie de Montreal. In these the alternate effects of night and day, and storm and sunshine, were beautifully produced. To these effects of light were added others, from the decomposition of form, by means of which, for example, in the Midnight Mass, figures appeared where the spectators had just beheld seats, altars, &c., and again, as in the Valley of Goldau, in which rocks tumbling from the mountains replaced the prospect of a smiling valley. The methods adopted in these pictures were published at the same time with the process of the Daguerreotype, by order of the French Government, who awarded an annual pension of ten thousand francs to Daguerre and M. Niepce, jr., whose father had contributed towards the discovery of the Daguerreotype. Daguerre was led to experiments on chemical changes by solar radiations, with the hope of being able to apply the phenomena to the production of effects in his dioramic paintings. As the question of the part taken by him in the process to which he has given his name, has been discussed sometimes to his disadvantage, it appears important that his position should be correctly determined. in 1802, Wedgwood, of Etruria, the celebrated potter, made the first recorded experiments in photography; and these, with some additional ones by Sir Humphrey Davy, were published in the journals of the royal institution. In 1814, Mr. Joseph Nicephore Niepce was engaged in experiments to determine the possibility of fixing the images obtained in the camera obscura; but there does not appear any evidence of publication of any kind previously to 1827, when Niepce was in England. He there wrote several letters to Mr. Bauer, the microscopic observer, which are preserved and printed in Hunt's *Researches on Light*. He also sent specimens of results obtained to the Royal Society, and furnished some to the cabinets of the curious, a few of which are yet in existence. These were pictures on metallic plates covered with a fine film of resin. In 1824, Daguerre commenced his researches, starting at that point at which Wedgwood left the process. He soon abandoned the employment of the nitrate and chloride of silver, and proceeded with his inquiry, using plates of metal and glass to receive his sensitive coatings. In 1829, M. Vincent Chevalier brought Niepce and Daguerre together, when they entered into partnership to prosecute the subject in common. For a long time they appear to have used the resinous surfaces only, when the contrast between the resin and the metal plates not being sufficiently great to give a good picture, endeavors were made to blacken that part of the plate from which the resin was removed in the process of *heliography*, (sun drawing,) as it was most happily called. Amongst other materials, iodine was employed; and Daguerre certainly was the first to notice the property possessed by the iodine coating of changing under the influence of the sun's rays. The following letter from Niepce to Daguerre is on this subject:—

"St. Loup de Varennes, June 23, 1831.

"Sir, and dear Partner:—I had long expected to hear from you with too much impatience not to receive and read with the greatest pleasure your letters of the 10th and 21st of last May. I shall confine myself in this reply to yours of the 21st, because, having been engaged ever since it reached me in your experiments on iodine, I hasten to communicate to you the results which I have obtained. I had given my attention to similar researches previous to our connection, but without hope of success, from the impossibility, or nearly so, in my opinion, of fixing in any durable manner the images received on iodine, even supposing the difficulty surmounted of replacing the lights and shadows in their natural order. My results in this respect have been entirely similar to those which the oxide of silver gave me; and promptitude of operation was the sole advantage which these substances appeared to offer. Nevertheless, last year, after you left this, I subjected iodine to new trials, but by a different mode of application. I informed you of the results, and your answer, not at all encouraging, decided me to carry these experiments no farther. It appears that you have since viewed the question under a less desperate aspect, and I do not hesitate to reply to the appeal which you have made. J. N. Niepce."

From this and other letters it is evident that Niepce had used iodine, and abandoned it on account of the difficulty of reversing the lights and shadows. Daguerre employed it also, and, as it appears, with far more promise of success than any obtained by M. Niepce. On the 5th of July, 1833, Niepce died; in 1837, Daguerre and Isidore Niepce, the son and heir of Nicephore Neipce, entered into a definite agreement; and in a letter written on the 1st November, 1837, to Daguerre, Isodore Niepce says, "What a difference, also, between the method which you employ and the one by which I toil on! While I require almost a whole day to make one design, you ask only four minutes! What an enormous advantage! It is so great, indeed, that no person, knowing both methods, would employ the old one." From this time it is established, that although both Niepce and Daguerre used iodine, the latter alone employed it with any degree of success, and the discovery of the use of mercurial vapor to produce the positive image clearly belong to Daguerre. In January, 1839, the Daguerreotope pictures were first shown to the scientific and artistic public of Paris. The sensation they created was great, and the highest hopes of its utility were entertained. On the 15th June, M. Duchatel, Minister of the Interior, presented a bill to the Chamber of Deputies relative to the purchase of the process of M. Daguerre for fixing the images of the camera. A commission appointed by the Chamber, consisting of Arago, Etienne, Carl, Vatout, de Beaumont, Toursorer, Delessert (Francois), Combarel de Leyval, and Vitet, made their report on the 3d of July, and a special commission was appointed by the Chamber of Peers, composed of the following peers: Barons Athalin, Besson, Gay Lussac, the Marquis de Laplace, Vicomte Simeon, Baron Thenard, and the Comte de Noe, who reported favorably on the 30th July, 1839, and recommended unanimously that the "bill be adopted simply and without alteration." On the 19th of August the secret was for the first time publicly announced in the Institute by M. Arago, the English patent having been completed a few days before, in open defiance and contradiction of the statement of M. Duchatel to the Chamber of Deputies, who used these words, "Unfortunately for the authors of this beautiful discovery, it it is impossible for them to bring their labor into the market, and thus indemnify themselves for the sacrifices incurred by so many attempts so long fruitless. This invention does not admit of being secured by patent." In conclusion, the Minister of the Interior said, "You will concur in a sentiment which has already awakened universal sympathy; you will never suffer us to leave to foreign nations the glory of endowing the world of science and of art with one of the most wonderful discoveries that honor our native land." Daguerre never did much towards the improvement of his process. The high degree of sensibility which has been attained has been due to the experiments of others.

ANIMAL PHRENOLOGY.

THE EAGLE.

Different animals have ever been regarded as the personification or representative of certain ideas. The dove is an emblem of affection, the dog of fidelity, the fox of cunning, the wolf of treachery, the lamb of innocence, the lion of nobility. What the lion is to the family of quadrupeds the eagle is to the bird species. The lion is the king of beasts; the eagle is the monarch of the air, and has ever been associated with majesty and nobility. In the heathen mythology, an eagle alone was thought worthy to bear the thun-

der of Jove. Savage nations regard the eagle as an emblem of courage and freedom. The Indian warrior glories in his eagle's plume as the most distinguished trophy of his skill, and the most eminent signal of his own position and importance, as well as the most honorable ornament to his person, and will often exchange a valuable horse for the tail-feathers of a single eagle. Nor is the dress of the Highland chief complete without this badge of his high degree. Americans have a national interest in this powerful and noble bird. He has been chosen as our national coat of arms.

What child is not familiar with his appearance on the star-spangled banner; his broad pinions outspread as if protecting a continent, holding in his talons the olive-branch as an emblem of peace, and the arrows as if prepared to defend our rights against every invader, while in his beak he holds that immortal motto, significant of those bonds of union by which these separate States became a nation, "E Pluribus Unum," meaning, literally, "from many, one."

Of all the feathered tribe the eagle soars the highest, and has the most piercing vision. He cuts the air above the lightning and the storm, and looks with a steady gaze at the sun.

Besides giving his spirit of freedom and sweep of pinion a wide range, by making such lofty flights, it enables him to take an extensive survey, with his telescopic eye, of the air and country beneath, for his prey.

The eagle despises small animals and disregards their puny insults, and only when famishing with hunger will he stoop to feed on carrion. Like the lion, the tiger and the cat, the eagle seeks a living prey. His acute sight enables him to discern his prey at an immense distance, and, having once fixed his fiery gaze upon it, he darts down to its conquest with a resistless swoop. The structure of the eagle's eye, by means of which he is able to look steadfastly on the sun in his most dazzling splendor, and also to perceive his prey at surprising distances, is a subject of great philosophical interest. The optic nerve is very large; which gives keenness and power of vision, and there is a membrane connected with the crystalline lens which serves to accommodate the eye to variations of distance.

The noble bird which adorns the head of our article is the Washington Sea-Eagle, and is the largest specimen of the eagle family known on the globe. It was discovered, described and named by AUDUBON in 1814, on the Upper Mississippi. It is known only in North America.

This bird lives near oceans, lakes or rivers, and feeds mainly on fish, after which it dives like the fish-hawk, and upon water-fowl and such land animals as fall in its way; though it does not hunt for land birds or animals when it can find a full supply of fish or aquatic birds.

The color of the Washington Sea-Eagle is in the main a blackish brown, with a copper-colored tint; its fore-neck and breast a yellowish brown, feet orange yellow, bill and claws a bluish black.

Among ferocious birds the female is always the largest. The male bird which was killed by Audubon, and of whose drawing our engraving is a good representation, measured as follows:—

Length 3 feet 7 inches; extent of wings 10 feet 2 inches; length of wing when folded 32 inches; length of tail 15 inches; middle toe 4¾ inches long; hind claw 2½,—making the span of the foot 7¼ inches. The female being larger would enhance all the measurements. Her wings would be about 11 feet in extent.

At the first sight of such a princely bird, such a monarch of the air, no wonder the enthusiastic Audubon should have said,—"Not even Herschell, when he discovered the planet which bears his name, could have experienced more rapturous feelings. The name which I have chosen for this new species of eagle, 'The Bird of Washington,' may, by some, be considered as preposterous and unfit; but as it is indisputably the noblest bird of its genus that has yet been discovered, I trust I shall be allowed to honor it with the name of one yet nobler, who was the savior of his country, and whose name will ever be dear to it. To those who may be curious to know my reasons, I can only say, that, as the new world gave me birth and liberty, the great man who insured it independence is next to my heart. He had a nobility of mind, and a generosity of soul, such as are seldom possessed. He was brave, so is the eagle; like it, too, he was the terror of his foes, and his fame, extending from pole to pole, resembles the majestic soarings of the mightiest of the feathered tribe. If America has reason to be proud of her Washington, so has she to be proud of her great eagle."

The greatest of naturalists has coupled their names, and sent them, with his own, down the stream of time to be honored together.

WHITE HEADED, OR BALD EAGLE.

This is the bald eagle, the noble bird whose figure is emblazoned on our national standard, and which is known and respected in every clime as the ensign of a young, free and powerful people. The great strength, daring and cool courage of this eagle, joined with unequalled power of flight, render him very conspicuous in the eagle family.

He is distinguished for a ferocious, overbearing and tyrannical spirit, evincing the extraordinary development of his Destructiveness, Combativeness, Firmness, and Self Esteem, joined with a strong manifestation of Secretiveness and shrewdness of intellect. The heads of all eagles, hawks, owls and other ferocious birds have broad heads like those of the lion, tiger, leopard, cougar and lynx.

Yet the eagle seems to possess a nobler nature than the cat tribes of animals, in the more bold, spirited and courageous mode of pursuing its prey. The cat hides in ambush waiting for its prey, and takes it by stratagem and surprize, while, in general, the eagle takes an honorable, straight-forward mode of securing its prey. It exhibits intellect in combination with Secretiveness, as will appear in the sequel, in the capture of water-fowl, but Secretiveness is not employed except where cunning in eluding pursuit is manifested on the part of the game.

The flight of the bald eagle, says Audubon, "is strong, generally uniform and protracted to any distance at pleasure. When traveling it flies by easy flappings without any intermission. When looking for prey, it sails with extended wings, and has the power of ascending in circular sweeps, without a single flap of the wings, or any other apparent motion of them or of the tail, and in this manner it often rises until it disappears from the view, the white tail remaining longer visible than the rest of the body. When at an immense height, and as if observing an object on the ground, it closes its wings and glides through the air with such rapidity as to cause a rustling sound, like a violent gust of wind passing among the branches of trees. Its fall

toward the earth can scarcely be followed by the eye on such occasions, the more particularly because these falls or glidings through the air usually take place when they are least expected."

A very interesting instance of the Secretiveness of this eagle, in combination with intellect, is recorded by Audubon, as follows:—"At times, when these eagles, sailing in search of prey, discover a goose, a duck, or a swan, that has alighted on the water, they accomplish its destruction in a manner that is worthy of attention. The eagles, well aware that water-fowl have it in their power to dive at their approach, and thereby elude their attempts upon them, ascend in the air in opposite directions over the lake or river on which they have observed the object which they are desirous of possessing. Both eagles reach a certain flight, immediately after which one of them glides with great swiftness towards the prey; the latter, meantime, aware of the eagle's intention, dives the moment before he reaches the spot. The pursuer then rises in the air, and is met by its mate, which glides towards the water-bird that has just emerged to breathe, and forces it to plunge again beneath the surface, to escape the talons of this second assailant. The first eagle is now poising itself in the place where its mate formerly was, and rushes anew to force the quarry to make another plunge. By thus alternately gliding, in rapid and often-repeated rushes over the ill-fated bird, they soon fatigue it, when it stretches out its neck, swims deeply, and makes for the shore, in the hope of concealing itself among the rank weeds. But this is of no avail, for the eagles follow it in all its motions, and the moment it approaches the margin, one of them darts upon it and kills it in an instant, after which they divide the spoil."

During spring and summer the bald eagle, to procure sustenance, follows a different course, which does no credit to its character, especially as it is so well able to procure its own food without robbing other plunderers. As soon as the fish-hawk appears along our Atlantic shore or our large rivers, the eagle follows it and robs it of its hard-earned prey. Perched on a lonely summit near the ocean, it waits until the fish-hawk rises from the water with a fish, when he rushes at him, causing him to drop his prey. In an instant the eagle, calculating the rapid descent of the fish, closes his wings and follows it with the swiftness of thought, and grasps it before it reaches the water or the ground, and bears it off to feed the ever-hungry brood of the marauder.

Unlike the Washington Eagle, which dives for his finny prey, the Bald Eagle never dives to get them from the water, though he sometimes seizes small ones in shallow water among rocks along the shore. It devours pigs, lambs, fawns, poultry, and sometimes, when pushed to the extreme of hunger, feeds on putrid flesh.

Bald eagles generally live along the coast and rivers, and are seldom seen among the mountains of the interior. Their mode of defence is similar to that of all other eagles and hawks, throwing themselves backward and striking with their talons, keeping their mouths open and their heads turning rapidly to watch every movement of their foe.

Eagles are supposed to live to a very great age—even a hundred years. On this point Audubon says in substance,—"I once shot one of these birds with its tail and wings so worn and rusty that I imagined it had lost the power of moulting. Its claws and bill were much blunted. It could scarcely fly more than a hundred yards at a time, and this it did heavily and unsteadily. The body was poor and tough. The eye was the only part which appeared to have sustained no injury. It remained sparkling and full of animation, and even after death seemed to have lost little of its luster."

The Bald Eagle is seldom seen alone. The mutual attachment formed between two individuals when they first pair, continues until one of them dies. They hunt for the support of each other and for their young, and seldom feed apart; showing a beautiful illustration of that faculty possessed by mankind and by several species of birds and animals, called "Union for Life."

This bird builds its nest on a high tree, never on the rocks like the Washington and other eagles. The nest is built of sticks, a yard in length, moss, seaweed, turf, &c., from five to six feet broad, and often of nearly the same thickness. The male and female birds often sit on the eggs, which are two in number, and brood the young alternately. The same nest is occupied by a pair of birds for many successive years. The young remain in the nest until they are full-fledged and nearly full grown, when the long, tender and assiduous care of the parents, now no longer needed, is at once changed to a course of apparent cruelty, for they drive them forth from the nest to take care of themselves, after which they are treated as strangers.

The young eagles of this species breed at one year old, although they do not attain their full beauty of plumage and color until they are three years old.

The general color of the bald eagle is deep umber-brown—head and neck white; the tail whitish. Length from the beak to the end of the tail 34 inches; extent of wings 7 feet; weight, males from 6 to 8 pounds; females from 8 to 12 pounds. The weight of the Washington Eagle is about 12 pounds for the male and 15 pounds for the female.

The Golden Eagle is a noble specimen of this family, and although it is found in every part of the United States, it is not very plenty. In Britain it is much more numerous. It is about the size of the Bald Eagle, and is remarkably ferocious and courageous. It builds its nest, which consists of a few dry sticks, on some inaccessible shelf upon some overhanging cliff. Young fawns, racoons, hares, wild turkeys, and other large birds constitute their food, and they never descend to putrid flesh, except in extreme destitution. They are very nice in cleaning the skin and plucking the feathers from their prey before eating it. Its plumage is of a golden brown, and it is the feathers of this bird with which the Indian is so ambitious to deck himself.

The White-Tailed Eagle is of a palish brown color, bordering on the yellow about the head and neck, and is remarkable for the snowy whiteness of its tail. It builds its nest among the wildest cliffs near the sea or other body of water, and like the bald eagle, depends upon other birds to catch the fish it eats, of which it is very fond. This is not its exclusive diet, but it preys upon birds and other animals, and does not hesitate to feed on putrid flesh. This eagle is very numerous in the bold headlands of the northern coast of Scotland.

No eagle is more wary in the selection of its breeding place, which is usually on some jutting crag, inaccessible to man from above and out of the range of fire-arms from below. There the wild triumphant scream of the eagle mingles with the hoarse thunderings of the ocean surges, and this is the young eagle's lullaby. How fit a place is this to nurse the native elements of freedom and noble daring—to inspire the spreading pinion to

cleave the clouds and tempt the eye to face the sun. Proud, imperial bird—well may you look down upon and triumph over all others!

Physiological Department.

PHYSIOLOGY.

The following very sensible remarks we copy from the Providence, R. I., *Mirror*, of Dec 27, and we commend them to the careful consideration of all. Than the subject of learning the laws of the body, and how to preserve health, the greatest of physical blessings, nothing except a knowledge of the mind itself can be more important. Nor can the latter science be successfully studied and understood without a knowledge of the former. How preposterous the idea for parents to take in charge the training and development of a child, bodily and mentally, with no more knowledge of the laws of Phrenology and Physiology than they have as farmers, of navigation, or as navigators, of managing a cotton-factory, a paper-mill, making watches or steam-engines. We claim of him who makes our boots an education to the business he assumes to practice. We would prosecute a man as a charlatan and a swindler who, without an apprenticeship to the art, mystery and philosophy of the trade, should attempt to shoe a horse and injure him in the process. The physician, *when it can be proved* that, through ignorance of his profession, he has killed a patient, is justly tried for manslaughter. But the mother assumes the duties of feeding, clothing, medicating, and managing her children with as little knowledge of the laws of their bodies as a street-paver has of the mechanism of a watch. Parents and teachers assume the management of the immortal minds and characters of children, who are as ignorant of the laws of mind as the tailor is of practical blacksmithing or shipbuilding.

How long shall this ignorance be regarded as unimportant, not to say morally criminal? Do we think more of the proper qualification for his vocation of him who makes our shoes or those of our horses, than we do of those who mould the minds and care for the health and development of the bodies of our children? Alas for the health and lives and morals of society, it is too true.

But it shall not be our fault if this ignorance in some good measure be not chased away from the horizon of public sentiment. Thousands yearly go to untimely graves, and other thousands to untimely and unnecessary degradation and misery, who might have been saved to themselves and to society by such mental and physical training as any person of common capacity to learn can adopt by reading a single volume of the Phrenological Journal. Any mother who is capable of administering her culinary department, who can make a loaf of bread and dress a steak for her family, can learn so much of Physiology and Phrenology as would make her equally qualified to conduct their mental and physical management.

"PHYSIOLOGY.—This is the most important yet most neglected branch of education. Very few of the teachers of our schools understand any part of it, and yet they are considered perfectly competent to teach the young and rising generation. Since Dr. Wieting commenced his course on this subject, in this city, one of our female teachers was asked if she intended to attend his lectures. Her answer was that she did not, for it was a subject she was not interested in at all!! A young lady—a *teacher*, and not interested in the subject of Physiology! Suppose one of her scholars should ask her—and children often ask questions that require knowledge to answer—why the heating of school-rooms, with the windows and doors closed and no chance for ventilation, makes her head ache and produces an irritation of the lungs so that nearly all the scholars begin to cough like so many little consumptives? Why, 'I am not interested in Physiology, and don't know enough to tell you!' What else could she say?

"The fact is, education goes like everything else—by fashion, and it is fashionable to learn, not only all English branches, but French, German, and Latin, instead of the far more important science of Physiology. A child is early taught that it is highly necessary to learn how to *die* right, but they never hear of learning how to *live* right in a physical sense. They see and hear lamentations of woe at the loss of children and friends, and exhortations to be 'resigned to the will of Providence,' but they are not taught that these premature deaths and all this distress come from man's own transgression, and that Providence is sure to help and keep in the vigor of life and health those who know how to, and do actually take the best care of themselves. We protest against this impious practice of charging the consequence of our own sins to Providence. It is almost blasphemy. Let us learn all about 'the house we live in,'—the way best to take care of it—the best diet and drink, the value of air, exercise and cold water, and not be complaining about 'mysterious dispensations,' as long as we are constantly bringing them on ourselves.

"Dr. Wieting is now lecturing in our city. He has manikins that he can take apart and exhibit all parts of the human body, and can give more information in one lecture than could be studied—without the explanations—in a year, or even without the skeletons and manikins. Whoever neglects to go and get information at so cheap a rate should never complain if they are doomed to swallow all the doctor prescribes, and foot the bill in the bargain."

Educational Department.

SECULAR EDUCATION.

BY GEORGE COMBE.

I have shown that every material enjoyment is the product of the mental qualities now named. Let us, then, select an individual—John Wilson—and inquire how far he possesses them, and how they effect his condition. Let us ask him, do you find your condition in life agreeable? Have you as much food and clothing, as comfortable a dwelling, as many innocent luxuries as you desire? If he answer, "No! Far from it: I am toiled to death, poorly paid, and consequently ill fed, worse clothed, and miserably lodged!" What shall we do to amend his condition? The very first step must be to enable him to comprehend the cause of his suffering. Let us then call in a jury of his fellow-workmen, and put John on trial. "Does John possess skill in his trade?" "Yes." "Does he possess steady application?" "We cannot answer for that, sir;" "Why, then, John, you fail in one of the indispensable requisites of well-being—the Vale of Clyde would have been a desert to this day, if all our predecessors had been very like you, possessing skill but deficient in steady application. Had they all acted as you, they would have been all as ill fed and poorly clothed as you are. As you are asking, John, a share of the good things produced by the steadiness of your predecessors, and by that of your fellow-workmen, without thinking it necessary to be steady yourself—if we would indulge you in this, and give you good food, clothing, and lodging, without your steadily applying your talents in producing more, what an example would we set to your fellow-workmen who would work! And what would this vale of the Clyde be like in a hundred years hence? It would be a collection of dilapidated ruins to tell where steady men had once

lived, but who were now extinct. John you must really try to become steady and punctual, and you will find your condition improved. Call Richard Robertson. Well Dick, are you skilful?" "No sir, I cannot boast of that: I am a laborer, sir." "Can you read?" "No sir: my father never sent me to school." "What do you work at?" "I serve masons, and sometimes I am out of work, and in winter we often cannot work, from the frost." "Very hard, Dick, but can you do any thing else; can you feed a steam-engine? take charge of a horse? work in a garden or field?" "No sir, I never learned any of these things." "Poor Dick, I am sorry for you, but do you not see that if all fathers had been like your father, the vale of Clyde would have contained neither houses, nor clothes, nor food, for you can only carry stones and mortar, you cannot apply them, and you are really better provided for than you could possibly have been, had you, and men like you, been left alone to rely entirely on what their skill and industry could produce.

"Your misfortune, Dick, has been parental neglect. We must try to teach you something that will enable you to turn your hand to work in which knowledge is needed, and if you are honest, and steady, and punctual, and economical, you will do better."

Now, we might proceed in this way through large numbers of working men, and trace their privations to deficiency in themselves in skill, in steady application, in economy, in punctuality, in sobriety or in honesty; and I ask how can we render the condition of such men prosperous, until we remove their defects. I am not drawing imaginary cases. I was brought up among the working classes, and have constantly taken an interest in them, and speak from observation. The week before last I saw a workman in England engaged in a piece of work ordered by the Duchess of Kent, in consequence of having seen the fabric in the Exhibition. The workman was highly skillful, and had a guinea and a half a week of wages, yet he was in poverty. Why? Because he devoted two and sometimes three days in the week to drinking! Had he possessed the moral qualities now enumerated, he would have been an independent man; and many, very many of you whom I now address possess skill, steadiness, and all those moral virtues, and you are independent men.

There is a large class of mechanics and skilled laborers in this country who are sober, honest, economical, and steady, and they are in highly comfortable circumstances, and morally and intellectually most respectable. In fact, using other men's capital, they are the producers, and they divide fairly the profit with their employers. The misery, destitution, and wretchedness which afflict British society is confined chiefly to a class in whom intellectual ignorance and incapacity, moral imperfection, or bodily weakness almost universally prevail; and there are only two ways of disposing of this class; either we must remove their ignorance, improve their moral habits, and strengthen their bodies, or support them as burdens on the industry of the better workmen and the capitalist. I propose the former course, and how can it be done except by education?

I do not hope to improve the old, but when we see the causes of destitution, we should try to save the young from falling the victims of them. We must instruct them in the conditions of well-being, and train them to comply with them. We must not allow them to grow up with the notion that they may be ignorant and yet be well paid; unsteady, and yet be well fed and clothed; unpunctual and dishonest, and yet find good employment with high wages. Our schools, generally speaking, have been founded by men of letters, and teach words. We must reform our schools, and enable them to teach practical knowledge; and we must send all the children to school to be instructed and trained. It is clear that the ignorant and destitute cannot pay teachers to give this kind of education to their children. The upper and middle classes and the well-to-do mechanics may, and do send their children to school; but the ignorant and the destitute do not and cannot.

For generation after generation, they come forward as paupers and criminals to lie as burdens on the industrious; and unless those who are superior to themselves make an adequate moral effort to instruct and train them, the evil will never diminish. I propose, therefore, to erect schools to teach the children of all classes who choose to attend them, free of expense, the structure and functions of their own bodies; the structure and laws of physical nature, and the relation of man to these objects and laws, the facts of social economy, and, above all, the laws of morality and religion, and the indispensable necessity of our observing them in order to attain prosperity; and we must train the young to act on this knowledge. These measures will not banish all vice and want, for in many individuals these spring from organic defects, but they will diminish them, and they must precede all other plans and appliances for human improvement, unless we can work miracles.

Adult artisans and laborers, not trained to think and reason, cannot attend to discourses on abstract subjects, and hence sermons and lectures do not command their attention. This is the reason why lectures to mechanics' institutes are made amusing rather than instructive. "No one," says Dr. Carpenter, "who has had sufficient opportunities of observation, can doubt that the intellectual faculties which have been developed by cultivation, are generally transmitted to the offspring in an improved state, so that the descendant of a line of educated ancestors will probably have a much higher capacity for instruction than the child that springs from an illiterate race."—(Principles of General and Comparative Physiology, p. 512.) In reference to this observation, a medical journalist exclaims.—"How wide a field for action does this consideration present.

"How gravely do the spread of education and the science of intermarriage address themselves to the attention of the philanthropist and the legislator. The fruits of care and culture are not confined to the well-being of a single individual; they bear within them the blessings of increase, and multiply tenfold with each succeeding generation."

WINTER: ITS BEAUTY AND PHILOSOPHY.

All nature is one grand cycle of universal beauties and perfections. Of this, cold dreary winter might at first seem to be an exception, whereas it is as complete an illustration as any other phase of nature. Every created thing in nature plays some part, and fulfills some mission, in this universal scale of existences and ends. Then how much more every *great* arrangement? Let us look at WINTER as an example.

Its philosophies we will not now discuss, only briefly enumerate. Vegetation needs rest. Periodical stand-stills enter into the economy of universal growth. Winter furnishes it to some, to others, heat and drouth. In the animal economy, winter doubtless accomplishes a function even more necessary.

Besides, winter has inherent beauties and charms—its bright sunshine, reflected from the glistening snow and ice, its nerve-stimulating and brain-exhilerating cold, its glowing warmth—for in and by external cold, nature contrives to generate internal warmth, &c., besides furnishing the means of the most delightful rides; for is there, or is there not, something *inherently* attractive in the sliding form of ride, as in the sleigh, on skates, &c.?

In addition to these inherent charms of Winter, how much does it enhance the beauties and glories of Spring, *by contrast!* Yet these suggestions are so obvious as to be commonplace. We pen this article to present other aspects of our subject.

Winter is accompanied by an almost incredible amount of COLD *—how much, it is hardly possible to conceive, as will be presently shown. Add to this those very sudden CHANGES from extreme cold to intense heat which form a part of nature's economies—caused by the presence and absence of the sun—and unless some all-pervading, self-acting contrivance existed to partially *neutralize* them, they would destroy every living thing. To prevent such sudden shocks, nature here, as often elsewhere, employs the balance-wheel principle as an equalizer of her operations, and frost, snow, ice, lakes, and mountains are nature's set of balance-wheels, established to equalize temperature. Thus, what is the freezing of the ground but the absorption by it of inconceivable quantities of cold, and held in a latent state till warmth returns sufficient to again set it free? Take one square foot of frozen earth, and estimate as near as you can the amount of latent cold it contains, by placing it so near your person that you shall FEEL all its cold! Then, how much cold is there embodied in all the earth, stones, wood and everything else frozen, say in a single night? And how terribly intense would this cold be, but for this its absorption by frozen substances? Take a cold November night. Imagination could not conceive its frigidity but that this freezing arrangement *takes up* cold about as fast as it is generated. But the next morning's sun, how warm and genial! Yet mark—it has first to *neutralize* the intense cold

* Allusion is here made to cold as if it were a *positive substance*, yet without attempting any philosophical accuracy. The books say it is not a thing, but a *condition* caused by the absence of *heat*.

stowed away in frost the night preceding, before it can effect a positive warmth, which takes till towards noon, perhaps all day.

But for this freezing arrangement, how terribly hot our days and cold our nights by this broad contrast! The same is true of several successive cold nights and warm days.

Please observe another phase of this idea. Take the month of March as an example. By this time, the sun shines so nearly perpendicularly upon the earth that his heating power has become very great. Then let several warm days succeed each other, and as heat rouses and starts vegetation, what could prevent the young blossom-buds and limbs from shooting forth, only to be nipped by the intense cold soon to follow? But, instead now, before warmth can revive growth, it must first NEUTRALIZE ALL THE COLD lying dormant by this freezing process, in all the ground, all the rocks, trees, ice, even lakes and mountains, and this requires so much time that, before it can cause vegetable life, another "cold snap" stows away another immense amount of cold in these nature's ice-houses, to again take up or offset another "warm spell." But for this, or some like arrangement, pray, what could protect man, brute or vegetable from these changes of temperature so sudden and extreme as to be absolutely fatal to all forms of life?

But, to look at this freezing philosophy on a larger scale. Take one square inch of ice into your mouth till it is melted, and how much cold has it given off while thawing? All this it *took up* from the air while freezing, leaving so much the less. Then multiply this amount by 144, and this by 12, — 1728, and imagine how much cold is absorbed by every cubic foot of ice! Then how much by yonder river, or lake, with its millions on millions of square feet of ice! And how inconceivable the quantity of cold taken up by all the rivers, all the lakes, all the frozen ground, frozen everything, even in a temperate climate! But how vastly more as we approach the poles! O, how beautiful, how useful, this philosophy of freezing!

But, as if even all this were not sufficient duly to equalize the temperature, nature makes the very rains of winter serve a like cold and heat equalizing office, by converting rain into snow. At its first formation, it is cold; but, whenever much cold exists, absorbing cold, it congeals into snow, which is every way analogous to ice, except in compactness, and thus takes up the cold of the upper regions, thereby prevents its pouring itself down upon us with resistless severity. Hence the remarks,—"It is too cold to snow," or "The weather is moderating for snow;" the cold having passed into snow. It also causes it to descend, thus consolidated, so as not to be felt, and there lie upon the earth's surface till the sun's heat liberates it by melting the snow. It also, like frost, helps to prevent the sun from rousing vegetation till he has dispelled all the cold contained in all the snow, all the ice, and all the frost, anywhere to be found, and this keeps vegetation back in Spring till it may come forward with safety. But for this arrangement, how completely would every form of vegetation be destroyed, first by the cold of Fall nights, succeeding so warm days, and chilling the very life's blood, and still more by hastening flowers and young fruit forward only to be suddenly killed by the other extreme of temperature.

Wind subserves another like cold-equalizing end. Thus, yonder mountain or lake furnishes a depository for an immense amount of cold imbibed in Fall and Winter. A warm day or spell having first abstracted the cold from ground and ice in surrounding regions, heats up the air, and this renders it light, and this causes it to be carried upward by the greater density of the yet colder air around these mountains and lakes. These cold winds from mountains and lakes, are therefore only temperature-equalizers, alike beneficial to country by retarding vegetation, as to mountain and lake by thawing them out.

Another universal chemical law comes in here to still further facilitate this heat and cold equalizing law, namely, that all liquids in passing into a solid form absorb immense amounts of cold, and in passing from a solid into a liquid state, give it off. Water, in passing into the still more refined form of steam, absorbs immense quantities of heat, which it gives off as it returns again to water. Hence we heat rooms most effectually by steam. Hence, rain, by the mere chemical act of solidifying into snow or ice, throws a vast amount of cold into a latent form, which, in melting again returns to the atmosphere.

Water again, even before it is cold enough to freeze, absorbs an immense amount of cold. Thus, water in a garden, in vessels, of a cold night, absorbs so much cold as to prevent things from freezing, even though the water does not freeze. Now, how inconceivable the amount of cold absorbed, not merely by all the ice of yonder lake, but by its vast body of water likewise.

But inconceivably immense as is this beautiful provision of nature for neutralizing cold, there yet remains another to render man comfortable Winter nights and days. "Clothes," anticipates a reader. Besides clothes, we require houses to ward off cold blasts, and driving rain and snow, and in which to luxuriate on nature's ten thousand times ten thousand in-door comforts. But to this end we must have LIGHT, and if we lighted them by ice, that same aperture which admitted light would also let in cold, and let out heat, so that to render a room warmer than out of doors would have been impossible. Heat and light are in substance one, slightly modified, but the same primitive element. How, then, is heat retained without excluding light? How can we retain warmth in our apartments, yet light them? Window-glass has the peculiar property of freely transmitting light, while it retains heat—another instance of Divine contrivance, not only for still further mitigating the rigors of extreme cold, but rendering ourselves comfortable even after its extremes have been modified by the freezing laws above described.

By another contrivance, still more necessary, and far more Divinely beautiful, does nature compensate increased cold by proportionally increasing warmth. The body, in its every part and limb, must be kept at just about one temperature—98 Farenheit. To vary many degrees either way is injurious, and even fatal to the life process. Then, when out of doors, exposed to these extremes of temperature, incident to our climate, even after all that compensation effected by frost, ice, water, mountains, snow, winds, &c., how is this equilibrium to be maintained? By clothes? But they MANUFACTURE NO warmth, only *retard* its escape, which, by the way, is all warmth in a room effects. Heat must be GENERATED WITHIN us, or, in spite of clothes and warm rooms, so much would escape in a few hours as would leave us chilled to death. How is this prevented? By BREATHING AND EATING. Food furnishes carbon, and breath oxygen, to the blood, which, in the smaller blood-vessels, unite and burn each other up by spontaneous combustion, and thus give off caloric.

So far so good. But the colder the weather, the more of this combustion and heat we require. Has nature any means of preserving this proportion? She has. It is this. The colder it becomes, the more condensed the atmosphere, and hence the more oxygen is contained in a given bulk of air, say in enough to fill the lungs. Hence, the colder it is, the more oxygen we inhale, and as, when well fed, the system always has a stock of carbon on hand, the colder it is the more oxygen fuel we inhale, and therefore the greater the combustion. The colder it is, therefore, the more *intense* warmth we generate—another beautiful compensation arrangement of nature. Nor is any other fire as agreeable as this. And mankind should rely far more on internal, and less on external, fires for "warm comfort" in Winter. And when suffering from cold, breathe deep, copious and rapid inspirations, and you will soon and effectually "warm up."

It remains to pick up a few of the crumbs of our subject. Snow also forms a vast blanket, to keep unabsorbed cold from the roots of trees and vegetables. Thus, farmers know how effectually snow prevents wheat from winter-killing, or freezing so as to draw out the roots. And what it does for wheat, it does proportionally for every form of vegetable life. But further South, just in proportion as cold diminishes, snow is neither required nor found. This snow and ice principle is SELF-ACTING, abounding most when and where most needed, and where not needed it is not found.

Ice, too, forms a blanket for water, just as snow does for land. By a peculiar arrangement, it rises to the TOP of the water, and thus prevents deep waters from becoming congealed, thereby saving fish from destruction, enabling man to cross rivers and lakes on nature's ice-bridge, and effecting many like desirable ends.

But by what LAW does ice rise to the top? Nature's general arrangement would carry it to the bottom, which would soon fill up our river-channels, turn rivers out of their courses, convert all our water into ice, and produce universal devastation. As cold contracts all bodies, why is not ice heavier in proportion to bulk than water, which would cause it to sink? Because, in passing from liquids to solids, all substances assume particular forms—some one form, other things other forms. Thus sugar always crystalizes into one shape, salt into another, and water into another—that of a star, as

we represent it, or in prongs, thus (*), as seen in thin ice, water in the snow-flake, &c. Now, though these separate ice-prongs are heavier than water, and would sink, they *overlap* and cross each other in infinite numbers, and at these crossings little holes are formed which, filled with air, become buoys, to keep the ice above the water.

If asked why these crystals do not sink as fast as they form, before enough accumulate to thus overlap one another, the answer is, that many things heavier than water swim on it before they become fairly wet. Some such arrangement doubtless prevents these incipient icicles from settling to the bottom.

Such, O man, are some of winter's beauties and philosophies! Let us all, then, both admire the infinitely perfect cause-and-effect arrangements of winter, while we enjoy their luxuries and adore and love their Divine Author!

Agricultural Department.

WINTER FRUIT.

In the abundance of summer fruits, when man is reveling in all the good things showered upon him from nature's prolific horn of plenty, he is too apt to forget, in the opulence of the present supply, that a dreary winter is coming, when the generous hand of our common mother will be temporarily closed.

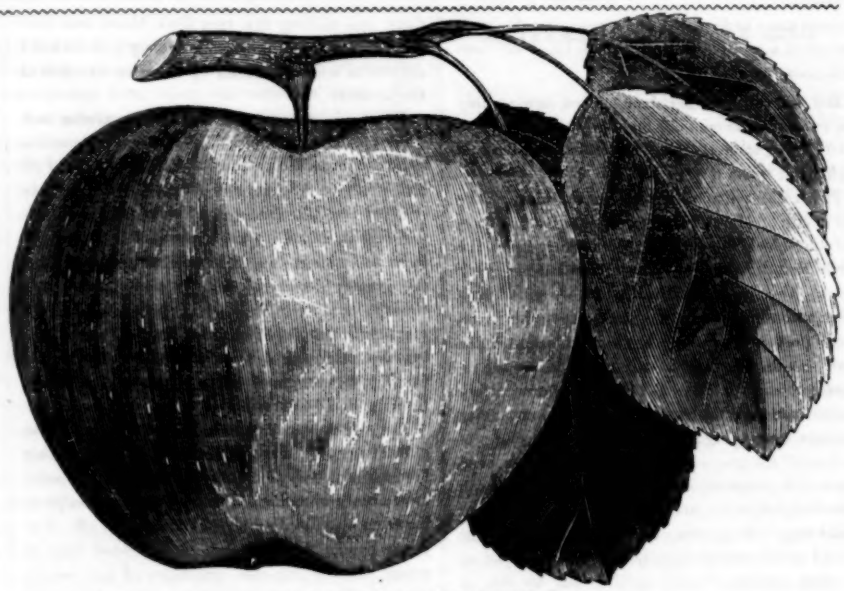
Man should be wiser than the beast, nay, as wise as the bee and the squirrel, and by the aid of his superior reason, adopt means to cultivate and *preserve* many kinds of fruit for winter use.

Man can subsist, it is true, on the various grains, salted meat, potatoes, dried fruit, &c.; but how much more delicious is fresh fruit, so far as it can be kept in this condition; and how much more like *living* is it, to have one perpetual summer, even in our rigorous climate, by continuing through the season of frost a plentiful supply of fruit, that it may be a constituent in every meal!

It is not enough to tumble a quantity of bruised apples, *shaken* rudely from the trees, into a large bin, in some warm, damp cellar, to mold and rot, allowing only such a use of them as can be snatched during the few weeks or months that they may keep in such a state. They should be not only carefully cultured from the finest varieties, but carefully picked by hand, and placed in a cool, dry place, in such a manner as that every decaying one may be readily removed.

With such skill in raising, and proper care in preserving, every householder in the country and in the city, may be able to regale himself with choice and delicious fruit every month in the year.

It is nothing uncommon for us to have apples in good preservation for weeks after strawberries and cherries become plenty in our market. If the farmer can raise apples that will keep good after a long journey to our large cities, until the next year's strawberries are brought to the same market, it is self-evident that the grower himself might have them as a home luxury even longer than his city customers.



RICHARDSON APPLE.

"This apple," says that excellent agricultural journal, the New England Farmer, "originated in the orchard of Ebenezer Richardson, of Pepperell, Massachusetts. A few years ago it was exhibited at the Concord (Massachusetts) Cattle Show, and among many fine specimens of apples it was distinguished for its large size, great beauty, and superior quality. It has been disseminated considerably in nurseries, but has not yet gone into general cultivation. It is one of the most tender, delicious, fine-flavored apples of its season; large, roundish, inclining to conical; smooth; green, mostly covered with red, bright in the sun, with numerous large, light specks; stem two-thirds of an inch long, rather stout, in a broad, deep cavity; calyx large, open, in a narrow, deep basin; flesh greenish white, remarkably tender, juicy, of a rich, delicious, and almost saccharine flavor. Good specimens are of the highest order; those in the shade want character. This is a moderate grower, and the original tree is called a good bearer. It ripens from e first to the last of September."

We hope to see this excellent fruit widely cultivated, East, West and South.—Eds. Phren. Jour.

The truth is, there is not one-fourth as much fruit raised as there should be. Not only should every farmer have it in abundance the year round, but every villager, who has an acre or two of ground, should raise a full supply for himself, and then those having large farms should turn sufficient land, labor, and attention to fruit-growing to make fruit of all kinds comparatively cheap, and absolutely abundant in all our large towns. How many millions of acres of rough, untillable land have we, east of the Alleghanies, now lying waste, which would produce good crops of winter-apples, pears, peaches, &c.!

Good land will give as profitable a crop, for the labor, in fruit as in anything, and although rough, rugged land will yield less of fruit than good soil, yet how much more will the broken, rocky land yield in fruit than in any other crop. Thousands of farmers there are, who grub on an unwilling soil to raise corn and other grain crops, and by dint of clearing off the stones from a few acres of land, that it may be mowed, while they leave the rocky hillsides, which constitute a great majority of their entire domain, to grow up to rank weeds and bushes, to furnish a poor apology for pasture; when, would they turn their attention to planting those hills and rocky glens to good fruit-trees they might not only live more easily than now, but make money and live like lords.

If any of our readers, and there are doubtless thousands of them, who are now, in this cheerless month of February, living without fruit, and who must continue to do so until next June, let them resolve to plant some fruit trees as soon as the frost is out of the ground. Now is the time to make the resolution, when you feel the value and importance of the subject, to select your ground, make the purchase of your trees, and establish the determination to effect this good object at the earliest available moment.

And those who live in cities and pay, as now they do, from three to six dollars a barrel for apples, will thank us for the suggestion; but the farmer, far more, who will put it into practical execution. We want fruit so very plenty as to be so cheap that all may have it in abundance; and when this good time shall come, the whole people will form the habit of using it profusely, ministering alike to the advantage of their own health and happiness, and to the sure sale of the article and the profit of the grower.

Among the excellent varieties of the winter apples which are valuable for cultivation, we may mention at this time the following:—Baldwin; Belle-Fleur, several varieties; Chandler; Gloria Mundi; Golden Ball; Golden Harvey; Yellow Newtown Pippin, keeps to July; Pearmain; Pound Royal; Peck's Pleasent; Rhode Island Greening; Russets—Golden, Boston, Putnam, English; Swaar; Ladies' Sweeting; Spitzenburgh; Wine Apple, &c.

In our present number we give an engraving of an excellent fall apple.

MARSHAL SOULT.

This eminent man—a Marshal of France, and associate of the great Napoleon in his brilliant career, died on the 26th of November, aged eighty-two. Jean de Dieu Soult, Duke of Dalmatia, and Minister of War to Louis Philippe, was born of humble parents at St. Armand-de-Bastide, in the department of the Tarn, on the 29th of March, 1769, in the same year as the world renowned Emperor Napoleon, the Duke of Wellington, Baron Cuvier, Chateaubriand, and Sir Walter Scott. At the age of sixteen, in 1785, he enlisted as a volunteer in the Royal Infantry. After passing through all the grades, he was promoted in 1792 to the rank of adjutant major. In the same year he was made the commander of a brigade. He distinguished himself by a bravery always subservient to sound discretion. He rose with a rapidity peculiar to a time when there was too much at stake to allow of etiquette or routine to interfere with the requisition for men fitted for great deeds. His character was not only that of a brave officer, but one who was brave at the right time. His merits attracted attention and seconded promotion. He was a man of genius; he won the confidence of his inferiors, and the admiration of his superiors, in command, and his fame and genius accomplished wonders.

When Napoleon resolved to invade England, Soult was placed in command of the army encamped from Bologne to Calais. His discipline was severe—from day-break to night-fall he was on horseback inspecting their evolutions, or on foot superintending their labors in the intrenchments. Many complained, and Napoleon expressed a fear that they would sink under it. Soult replied, "Such as cannot withstand the fatigues which I myself undergo, will remain in the depots, but those who do withstand it will be fit to undertake the conquest of the world." Such expressions as these could not fail to command the admiration of one who was meditating so vast a design, and in 1804 Soult was made a Marshal of France.

His career lay under the scrutiny of a man whose discernment was magical, and whose judgment was seldom biased by prejudice or feeling. Napoleon detected in a moment the talents of the rising general, and from that time the name of Soult is interwoven with the history of Europe. He fought in every war, almost in every field, with unchangeable skill. In every list of honors, and in every catalogue of imperial creations, he is included. Though not a personal favorite of the Emperor, he was among the first of the generals raised to the dignity of marshal, and the first of the marshals advanced to the distinction of the peers.

He was with Napoleon at Marengo, at Austerlitz, and at Eylau. At Austerlitz, Napoleon said, when he assigned to Soult his position, "The only instruction I have to give, marshal, is this—act as you always do." Soult did act as he always did—acted for himself. In the heat of the battle, orders came from the Emperor, who had waited a long time for Soult to move on the enemy, to attack without delay, and gain the hights of Pratzen. The aid-de-camp returned to the Emperor with the marshal's reply, "It is not time yet." The Emperor, enraged, and fearing a fatal blunder, sent a second order. It was unnecessary—Soult had put his column in motion. The marshal had been watching the Russians, who were extending their line, and thus weakening their center, which rested on the hights, and he had waited for the right moment. Napoleon saw the brilliancy of the movement. He galloped to the spot where Soult stood, and in the joy of the assured conqueror he said, "Marshal, you are the ablest tactician in the army." "I believe it, sire," cooly responded the marshal, "since your majesty tells me so."

PORTRAIT OF MARSHAL SOULT.

At Eylau his skill was equally conspicuous, and Napoleon was equally generous in his acknowledgments.

In 1808, Soult entered Spain, but not being properly sustained by King Joseph, and opposed by the extravagant notions of several of his generals, his success was not equal to what was expected from his talents. He next invaded Portugal and achieved a brilliant victory at Oporto.

Soult was withdrawn from Spain, and made commander of the Imperial Guard. He was again, in 1813, sent to Spain to check the victorious march of Wellington, Soult being the only man except himself whom the Emperor thought able to meet the "Iron Duke," or worthy to take the critical trust. Soult went and did all that mortal could do in a hostile country against a veteran army flushed with numerous victories. In 1814, Wellington drove the French troops for 200 miles, but Soult struggled fiercely in his adversity, and never lost the confidence of the Emperor.

When Napoleon retired to Elba, and Louis XVIII. was restored, Soult became Minister of War, but when Napoleon returned from Elba, Soult having ceased to be Minister of War, his love for and confidence in him led him to join Napoleon.

At the battle of Waterloo he was at the Emperor's right hand. After Napoleon's defeat and imprisonment at St. Helena, Soult left France and spent three years in writing his military memoirs, little expecting that but half his career was accomplished. In 1821, we find him in Paris, and again a Marshal of France. Being now a political personage of great importance for good or for evil, and discovering that Louis XVIII. and Charles X. were in turn trying to maintain absolute monarchy in connection with Parliamentary government, Soult kept himself wary and reposed on his laurels, enjoying the homage of society.

When Louis Philippe became king, Marshal Soult ceased his reserve. There was a strong government for France at last—a monarchy limited in its power, and surrounded by republican institutions. Soult added to that government the great power of his name and fame, and to him Louis Philippe looked for support beyond all other men.

In 1837, Queen Victoria ascended the English throne, and at her coronation, in 1838, Marshal Soult was sent as ambassador extraordinary to London, to cement the English alliance. Here he met the Duke of Wellington, his old opponent of Toulouse and Waterloo, and arm in arm the two heroes appeared among the people. No foreigner, if we except Kossuth, was ever so lavishly honored in England.

During the reign of Louis Philippe, Soult had a difficult part to act, but he maintained his honor intact with his nation, and towards the close of the Orleans dynasty he lived in retirement in the enjoyment of boundless fame and fortune.

The portrait which we give may be relied on for its accurate resemblance of the far-famed hero of a "hundred fights."

Mechanical Department.

THE GRAVEL WALL—

ITS MATERIALS, AND MODE OF WORKING IT.

Our last article showed the cheapness and strength of the gravel wall. The present will SHOW HOW TO MAKE IT. First, let it be distinctly observed, that its principal cost consists not in the material but the labor. Consequently economy in mixing and handling the stuff, and getting it to its place, should receive *primary* attention. Observe, also, that with the proper facilities, or when the stuff is handled to advantage, several hundred per cent of the labor is saved. Where everything works unhandily and at arm's length, it will require considerable labor to accomplish a little, yet far less than in mason work; but where everything is handy, a little labor will put up a great deal of wall.

Hence the builder's first attention should be directed to the PLACE of his mortar-bed; and the essential point here is to so locate it that the material—lime, gravel, stone, and water—can be emptied from the wagon or cart close along side of the mortar-bed, and also, so that the stuff can be readily wheeled in barrows from this mortar-bed to the wall. In general it should be placed *inside of* the house, and near an outside door or window, so that the team can deposit it just outside of the house to be shoveled or wheeled through the window into the bed.

In general, also, one of the lower rooms can easily be made a mortar-bed by simply laying down some boards level, so that the shovel will work easily upon them. In many cases the walls of the room in which the mortar-bed *is*, can be made to serve the purpose of side-boards, and the doors and windows of the room serve to convey the materials to and from the bed. The builder can hardly bestow thought, invention, contrivance, and adaptation of ways and means to ends, to better advantage than in the *placing* and arrangements of the mortar-bed, so that the materials shall work easily to and from it.

A second point of prime importance should be *water*. In building a house where a well is to be dug, let that be the first thing done, even before the foundation of the house is laid, and the more easy the conveyance of the water to the bed the better, for large quantities of it will be wanted; hence if the water cannot be brought directly to the bed from the pump in troughs, let barrels be stationed just inside or outside the bed, and easy of access, both to fill and empty. If the water is to be brought from some distance in barrels—not a very unhandy way of getting it—let barrels enough be stationed near the bed to hold a load, and bring at once in another set of barrels as much as can well be drawn. But see to it that a supply is always on hand.

The next point of consideration should be the place *for depositing the gravel*. It matters less whether the lime is handy to the bed or not, for as but little is required, it makes little difference; but since the great staple of the wall is gravel and stones, arrange it so that they can be easily conveyed into the bed.

In many localities the cellar itself will furnish the very gravel required for the wall, so that, all you have to do is to shovel it out of the cellar into the mortar-bed, and thence into the walls. In such localities the mode of procedure is this.—First take off the top soil and dirt, such as is not fit to be incorporated into the wall, leaving your gravel as clean as may be. Then dig a trench the width you wish your foundation wall, and as low down as you wish your cellar, perhaps a little lower, so as to keep out rats, and make it a few inches wider below the bottom of the cellar than above, so that when rats would dig in or out, they will find a hard substance to prevent them. They naturally begin close to the wall, so that if the wall is wider below the cellar bottom than above, they will never work through. Observe, too, that this extra width should be on both sides. A few hours labor here will forever keep rats out of your building. If your gravel or material will enable you to dig your trench the shape you have your wall, all you have to do is to dig out the loose dirt, and throw in the compound to be described hereafter, using cement instead of lime. But if your soil or gravel caves in, you will be obliged to dig a trench wide enough to allow boards to be put up for boxes in the manner to be shown in our next article. Meanwhile, leave the inside part of your cellar undug, and as you wish gravel, shovel it right out of your cellar rooms into mortar-beds. Thus you will dig your cellar as you build your house, "killing two birds with one stone, and making one hand wash the other," besides saving all the carting of material, and where such a facility for building exists, it may be cheaper even than was stated in our last article.

We have said that the mortar-bed should be placed where the material could be got from it to the wall handily. The wheel-barrow is the best means for accomplishing this end; and two or three barrows will be found to save in the structure of a common house enough to pay for themselves several times over, because stuff can be wheeled up much easier than backed. To render this wheeling easy, you require tracks and scaffolds of boards on which to pass and re-pass, and I found it a most important point to rig permanent scaffolds, instead of rigging a scaffold for one side, then taking it down and moving to another, as I at first did. Hence it will be well, generally, to rig your scaffolds on the inside, though the outside will do, provided your mortar-bed is outside, the only difference being that you will have to go much farther with the barrow on the outside of the house than if inside. Besides, you require to have the wheel-barrows *pass each other*, and by mixing the stuff inside, and having a set of scaffolding around the outer wall, the barrows may pass and re-pass easily. If your walls are not more than ten feet high, you may even dispense with scaffolds entirely because a man stands some six feet, and can without much trouble shovel four feet above his head. He will, however, save considerable time on the upper part of the wall by having the scaffolding, and even on the lower, because by first placing the boxes, and then erecting the scaffold, he can wheel his stuff on the scaffold, and *dump* it from the barrow right into the boxes, thus emptying a barrow in a second, and save shoveling. These scaffolds are easily made: floor timbers you must have, and by getting them on the ground to begin with, the main material for scaffolds is ready. All you now require is horses, (benches,) which are made and placed some twelve or fifteen feet apart. But with these suggestions the reader will set his own Causality at work to contrive whatever labor-saving improvements he can. My own experience is, that these scaffolds will many times over save the cost of their construction, and the floor timbers are just as good after being thus wheeled on as before.

Still, even if obliged to carry your stuff by hand, or in hods, pray how much more labor will it require to carry gravel and mortar than brick and mortar? Your walls require to be no thicker, so that no more stuff is required in the gravel wall than in one of brick or stone.

Having arranged these matters economically, the builder should next learn to MIX the mortar, which consists simply in putting your coarse and fine gravel, sand, stones, and lime together in due *proportions*. And here a few simple principles will guide you. Your main element is gravel; and to make a complete wall you require various *gradations* from fine sand up to stones as coarse as the size of your wall will contain. And the more perfect this gradation, the better will be your wall. Hence, stones, large and small, become valuable acquisitions to a wall, and strengthen it, whereas fine sand, though it will do, is not so good as coarse and fine mixed together. If your gravel bank should not contain much sand, it will still do, for wherever the gravel stones touch each other they will bind, and the more the whole space is filled up, of course the stronger the bond, and the narrower the walls need to be. Again, the more large stones there are, the less lime is required. The philosophy of mortar is this; lime coats the sand and adheres to it—it also sticks to itself. Accordingly, particles of sand are bound together by the lime. Now take a stone as big as your head, and take sufficient sand to make a like amount of wall; in the one case only the stone has to be coated over with lime, in the other, each of the minute particles of sand requires to be coated, the same as if the stone were broken in fragments, and required to be bound together again by the lime. Hence the coarser the materials, the less lime will be required; yet there must be sufficient fine material to give it bond, or to fill up at least in part the small crevices.

My own house is composed of very little sand and gravel, but mostly of slate stones. In beginning the foundation, I had to dig off quite a ledge, say six feet in some places, and under the most of my house. This gave large and small stones, some hard and others brittle, so that they could be easily broken up fine. The large ones I had blasted and hammered with a sledge, breaking them into all sorts and sizes of pieces, and, generally, kept the

sledge at work pounding the brittle ones as the shoveler shoveled. Stones that were coarse and hard, I put into the wall without attempting to break them, usually allowing them to pass right into the mortar-bed. Yet there is no need of any great particularity as to this material, so that it be clean, and so that there be enough of finer particles to give a due degree of cohesion. Yet if it is full of little holes like a honey-comb, no great harm is done, only the wall will not be quite as solid, but probably solid enough. My own was very full of crevices, indeed was very rough, but this only allows the outside and inside coats of plaster to fasten the more firmly, which coats add greatly to its strength.

I at first thought to put in the stones separately by having them placed on the scaffold first, and as a shovelful of the composition was thrown in, lay a stone on top and so on, but found that the cheapest way was to let the coarse and fine stones all go into the bed together, and go together into the boxes.

It should here be observed, that clay will furnish a very good substitute for sand, and aid in filling up those honey-comb openings, so that where the sand or gravel are difficult to be obtained, and clay easy, you can use *clay*, lime, and coarse stones to as good advantage as *gravel*, lime, and coarse stones. In fact, I am satisfied that simple clay and coarse and fine stones, even without any lime, will make a first-rate wall, solid enough for all practical purposes as a good basis on which to plaster. Or if you live in a country where both coarse stones and gravel, as well as sand, are difficult to get, clay put up in the boxes, next to be described, will, in my judgment, answer every purpose. At least I shall soon test it practically. Yet, too much yellow loam and dirt in your composition will be injurious unless rendered strong with lime. In one of my stories I allowed too much yellow loam to find its way into the mortar-bed. Still the wall stands—yet is not as strong as it would otherwise have been. Of course the gravel should be tolerably clean; yet, after all, a good supply of lime will render your wall strong enough, notwithstanding it may contain considerable dirt, so that the builder need not be extra particular about the cleaning of his material.

The proportions come next to be considered. The proportions I used in my two lower stories were about as follows—eight bushels of slacked lime, such as cost four and four-and-a-half cents per bushel at the lime kiln, and such as is put on land. Then put in some twelve to sixteen bushels of coarse and fine sand, and add forty bushels of those slate and rubble stones dug up from the foundation, along with perhaps from fifteen to twenty-five bushels of coarse stone. One of my beds was made in the following proportions:—ten bushels of slacked lime, which was equal to four bushels of stone, or unslacked lime; twenty-four bushels of coarse sand and gravel, and one hundred and fifty bushels of slate-stone chips and coarse stones, making one part of lime to over forty parts of gravel and stones. This was the poorest bed I made, and poorer than I would recommend, but it stands, a proof that it was good enough for all practical purposes. The proportions I would recommend are, one part stone-lime, to from fifteen to thirty of gravel and stone, according to the fineness of the gravel and quantity of stone, and more than all to the Cautiousness and Acquisitiveness of the builder; for if you are very timid, and not so Acquisitive, put in more lime; and yet one part in fifty will make a wall that will stand any weight and any roof you would be likely to put on it. It is, however, well to err on the safe side, and the more so, since lime costs comparatively little.

But it will here be asked, "What on earth can hold your stuff together?" I answer, "What on earth holds a stone or brick building together?" You answer, "Mortar." I ask, "What holds mortar together?" You answer, "Lime." Then I answer, "Lime." The bond principle in this mode of building is exactly the same as in every house built of brick or stone; and why will not lime bind just as strong with coarse gravel and stone as with brick and stone, and even stronger, for mortar rarely fastens directly upon the brick, because brick is smooth, and also absorbs its moisture quickly; before brick and mortar become amalgamated, the mortar simply forming a bed in which the brick lies instead of incorporating itself with the brick; whereas, in this case, lime, sand, and stone become imbedded together, fasten to each other, and hence form one solid mass, because mortar and lime will stick to rough stone much better than to dry, smooth brick.

Many people prophecied that my house would fall before I got it up. One of my neighbors gave my mason a real scolding for sanctioning this kind of wall, telling him that it would fall and kill the workmen; and without one single exception, all my neighbors and visitors said it was impossible, in the reason and nature of things, for it to stand. I answered—"Its bond principle is lime, and that is the *only* bond principle of all brick and stone buildings. Then why will not lime fasten this together as well as that?" adding, that I paid the bill, and was bound to have my way. So much for the *reason:* and the FACT is, that there it stands, and becomes harder and still harder every month. That it has stood one winter exposed to rain and frost, because only two of its four stories were yet up, and not one crack appeared in it, shows that it will stand the action of the weather perfectly well. One pillar cast late in the fall, and one place in the inside wall, which did not dry before frost came, peeled some, yet not enough to injure their strength, and we all know that mortar must get dry before it freezes, or freeze dry, or else its bond principle is spoiled. So of course with this kind of wall.

If you ask, "What are the advantages of this mode of building over a stone or brick wall?" I answer, first, in a stone wall you are obliged to *face* the stones, whereas in this case, your wall can be composed almost entirely of coarse stones; but the mortar thrown into the boxes presses down against the boards, and thus forms a face, and both mortar and stones are tumbled in helter skelter, instead of being laid stone by stone, and trowelful by trowelful of mortar at a time, thus saving a very large amount of the mason-work in laying. Also, by this method, the laying is done by common labor. Then again, by this method you have to draw no lines, whereas, in laying a brick or stone wall, a good deal of time is wasted in these linings, and there is a vast difference between tumbling a pile of stones and mortar pell-mell into a box, and laying each little pile, one by one, just exactly so. The plain fact is, that it costs hardly more to put up a wall by this method than merely to *tend* masons by the other. The mixing of the bed is done with a tenth the labor of mixing that amount of mortar, so that you save labor in both mortar-mixing, and stone and brick-laying.

THE MODE OF MIXING comes next to be considered. And here I effected a very great saving towards the last as compared with the first. Instead of, as is usual, working over the material, as for example, in working over a mortar-bed, first throwing into the bed the required quantity of lime, I wet or slack it perfectly, and rendered it about as thick as cream, or barely thick enough to work well on the shovel. I make it thus thin because it works easier, and becomes more completely incorporated with the sand and stones. I then throw in the sand, wheeling it on a plank across the bed, and *dumping* it here and there over the bed, as the case requires, still adding water, and one hand in the bed stirs it with the hoe or shovel, as fast as six other hands wheels it in. Toward the last the bed may become too stiff to work in all this sand well, in which case I simply spread it on top, then began at one corner and shoveled it over, throwing it back into that corner, thus leaving a trench between that shoveled and unshoveled, which trench I kept filled with water, and taking shovelful after shovelful threw it into this trench, and thus incorporated the lime thoroughly with the mass. A few minutes only are required to work a bed in this way, and shovel it back to one corner. I now began with my coarse gravel and dumped a barrowful into the vacant corner, and threw on two or three shovelfuls of this lime and sand; then another barrow of coarse rubble stones, and another two or three shovelfuls of lime and sand, heaping up the mass into the vacant corner until the pile becomes from one to three feet thick, when I lay down a board for the barrow to pass up on top of the pile, and dumping it down its side, the barrowful is of course *well spread*, so that a few shovelfuls of lime and sand are evenly distributed through the mass, and proceed thus until the lime and sand are all worked up. The bed is now ready for re-working and shoveling in the boxes. But, observe, it now consists of a layer of those coarse rubble stone and coarse gravel, and another layer of fine sand and lime, whereas, it requires that the two be completely worked together. I then begin to work the bed diagonally across these layers, adding water, and shoveling it over once and perhaps twice, which mixes it well, shoveling it into the barrow mixes it again, shoveling it into the wall, or dumping it, mixes it a third time, so that by moving the material to its place it becomes mixed. I usually had one hand in the bed for from five to seven wheelers. That is, these wheelers would bring in a barrow of lime, another with a water-pail would wet that lime as fast as it came in, and this bed-

hand would keep the hoe or shovel at work, so as to mix it about as fast as it came in. As soon as the wheeler had brought sufficient lime, they began to wheel sand, one hand keeping the hoe going as fast as the other four or five hands wheeled. By the time the sand was all fairly in, one hand, still at the water-pail, filled that trench already described, while the other hands turned it over and shoveled it back into one corner, which they would do in from three to five minutes. These same hands kept the lime and sand wet, and shoveled it into the barrows as fast as those five or six hands wheeled in. This same bed-hand now shoveled it over once, and shoveled it into the barrow as fast as two or three hands could wheel it, filling one barrow while the other was passing to be unloaded. The more the compound is shoveled over the better. It should be well mixed, but one hand will mix a great deal, besides filling the barrows.

After the ground story is up I recommend the tackle, and verily believe that ten times its cost can be saved even in putting up a two-story house; and that tackle becomes an errand boy, so that if you want anything that is below, this bed-hand, who should have a boy at command, also helping him to shovel, can send up what you want, and you send down what is wanted below. And then this tackle will always be of service about the house, for every house ought to have a contrivance for lifting trunks, furniture, &c., even after the house is built. I should think this tackle saved me half of my labor. I so placed it as that the tub descended into one corner of the bed. In making up the bed I always began to shovel the lime and sand into the corner where the tub came down, so that as I worked the bed the other way, when putting in the coarse gravel, I left that corner vacant, and began then to shovel into the tub. Shoveling into the tub was one mixing, emptying it above was another mixing, shoveling into the barrow was another, and from the barrow into the wall another, and this was all the mixing my material had. Yet I confess that shoveling over once before shoveling into the tub, would be better, because it distributes the sand and lime more evenly. Having thus described the process of getting the stuff ready for the boxes, our next article will pertain to the structure of these boxes, etc.

Miscellaneous Department.

"THE TRINITY,"

AN EXTRACT.

[The following we copy from a work by M. E. Lazarus, M. D., entitled "The Trinity, in its Theological, Scientific, and practical aspects, analyzed and illustrated." Our readers will, from the extract, gain a better idea of the work, and the style of the author, than from any comment we could make. Those desiring to peruse the volume can order it from the Journal office, price 50 cents.]

"Where Edenism is invaded by Civilization, it is usually an affair of extermination; where it gradually breaks up from the rudeness of climate and material poverty, its human elements form the isolated Savage horde, or the barbarous Nomad tribe, or the large Patriarchal family; which last, embodying better than the others the Family, or pivotal term in the reproduction of the Species, more easily lends itself to Social refinement and industrial progress, and gives origin to Civilization. The political institutions of barbarism modulate between despotism and anarchy; while those of civilization tend to constitutional monarchies, federated republics, and Democracy; manifesting a constant analogy with the Protestant churches in the religious tree, and ever asserting by charters, bills of rights, and popular voting, the respect of private judgment, of individual liberty, and of Self-sovereignty. It begins by emancipating man from personal thraldom, and ends by confessing that it has left him more than ever the slave of Material necessities and of the oppressions of Capital, whence the combined order of domestic and agricultural Association come to extricate and thoroughly emancipate him. The Industrial tree roots itself in the property of man in the soil, the necessities of his subsistence, and his insatiable desire of luxury. Its arborescent distribution in the branches of Agriculture, Mechanical and Domestic Arts, and their subdivisions, are too clear to need enumerating, and I only observe that each ultimate subdivision or function becomes the neutral pivot of a group of laborers, who, *in the combined order*, spontaneously assemble round the object of their industrial preference, and round the Passional chief or active pivot, who most completely identifies himself with this function, and takes the lead by divine right of genius, recognized by human right of election.

Industrial organization of the township, in extending itself over civilization, and commensurate with its progress, will elevate our politics and religions to harmony and unity.

Attractive labor, and the genial life of the affections, expanding freely in the intercourse of groups formed by the compound tie of sympathy of character and sympathy of pursuit, imparting charm to necessary work, and healthy vigor to sentimental affection, will restore to religion the body for which it languishes; now hovering over the human race like an unshriven ghost, coming back among the living to frighten them with hideous apparitions, spectral illusions, and other spiritual nightmares, as numerous as the bats in the catacombs of Egypt. Redeemed from the jungle of superstitions and the deserts of metaphysics, into the warm rose-light and fruit-bearing soil of the heart and the senses, religion becomes *one*, and co-extensive with those harmonious beings who, from their happy earth, will continually praise the Master and Giver of life.

His intentions in creating us will then be explained. Human destiny will then be no longer a scramble for bread—of hovel, hog, and hominy for the people, to which add horse, hound, and harness for the great folks. Destiny will then mean the full happiness of which man is capable by his integral development of physical, intellectual, and passional faculties in their proper spheres of useful action, which conciliate individual interests in social harmony by means of the serial hierarchy, the same order of movement which we find in the planetary world, in music, in organic physiology, and everywhere, in short, where harmony of parts exists in a collective whole.

The forms and expressions of worship must be as various as national and individual character.

God manifests himself in the creation.

1st. As love.

2d. As love incarnating itself in material forms and facts.

3d. Love attaining harmony in its expressions under the laws of supreme wisdom or mathematical order.

This corresponds with the phenomena of the passional life, where Love, the parent principle, potentially contains Truth, or the order of its own manifestation and expression in Practical Use, the generated principle or only-begotten Son of God.

From this statement of the Trinity we draw for the conduct of life this practical inference: that man can attain harmony and realize a destiny proportioned to his attractions only so far as he can incarnate or embody his ideas in practical uses, and fulfill his mission of labor by bringing the planet on which he is placed under integral culture, developing its resources, and harmonizing its elements according to the type and instinct of the universal harmony which he bears within him, and which is revealed to him by its correspondences in the distribution and movements of the planetary, atomic, and organic spheres, which lie open to his intelligent studies. Thus will the incarnation of Love in Matter be effected through Law or Wisdom.

By the light of this doctrine stand shamed and condemned all those one-sided philosophies which would sink man to the pursuit of merely selfish ends, or into the destructive monotony of mere labor, or would emasculate him by condemning the sensual principle to inaction and mortification, to make of man an image of the third person of the Trinity, rather ghost-like than God-like. It condemns that asceticism which causes man to neglect his noble functions, as harmonist of nature and society, in idle introspections, and to waste his life in star-gazing and idealizing; it condemns all *simple* efforts at self-development and self-perfection, the idle gymnastics of either body or soul, and shows productive use, combined with attractive methods and conditions of labor, as the absolute rule of success in the attainment of individual as well as of social well-being. It is only in attractive production that a circuit of action is formed, and that effort becomes no longer exhaustive, but a condition of influx and growth. Some humorist has defined *angling* as "a stick and a string, a worm at one end and a fool at the other;" but let a perch swallow the worm, and instantly the folly of the patient fool is converted into truly Waltonian delight, for a magnetic circuit is established between the actor and the object, the fool and the fish, as with delicious flouncings the latter reluctantly consents to be deposited in a basket, and take his chance for the next metempsychosis. For the plowman, the gardener, the artisan, a circuit more permanent of

activity and reception, afflux and reflux of vitality, is established with the earth, the plants, the object whatsoever of their useful labors, so that they become habitually robust and equilibrated in their health.

Agriculture gives the body or stamina of religion.

In its functions we co-operate practically with the Sun and the Earth, of which we are the most highly vitalized and intelligent products, in order to evolve other germs of life, power, beauty, and use.

We thus place ourselves in the conditions most favorable to the influx of life, and in fact the population of the globe is in every sense sustained by its agricultural districts.

In large cities, such as Paris, extensive and undisputed statistics show that the great mass of their indigenous population dies out about the fifth generation, and is supplied by continual reinforcements from the country. Cities act as social and industrial maelstroms, absorbing from a periphery of hundreds of miles the number of beings necessary to be used up in factories and workshops, and then deposited in warehouses, or folded away on shelves in the shape of lead, glass, cloths, knives, and various fabrics, traceable through every step of their transformation from the raw human material.

The Sun acting upon the earth and waters in the various zones and climates, gives all germs in their wild and indigenous state, but their refinement and extension into other locations, where they are not indigenous, as well as the multiplication of species and varieties, is reserved for the co-operation of man. The same human providence is necessary to the elements.

Electrical and Atmospheric conditions, while they modify and to a great degree control the being and action of our race, are in turn subjected to its control through the agency of a judicious and integral culture of the soil. Before man can exert upon his planet this office of the harmonist, it is necessary that he should cease from war and substitute industrial armies for armies of destruction. He must cease to destroy himself by any sort of internal conflict, whether between the nations which compose humanity or the classes which compose society, or between the individuals of the same class and department of labor, whom cut-throat competition now envenoms against each other, and gives an easy prey to the grasping talon of capital, or who, in the ruinous struggle of one corporation to crush another, find illusive and short-lived remuneration for their industry. War must also cease within the individual soul, now betrayed by theology, morals, and metaphysics into the unprofitable combats of self-discipline, convictions and futile self-blame, remorse, neuralgia of the soul; repentances again to be repented of, and the whole vicious circle of subjective experiences in which the feelings prey upon themselves, and thought turns to painful self-analysis, as in the diseased stomach, corrosive secretions eat away the mucous coat.

All these introversions, otherwise the most melancholy, tormenting, and incurable forms of passional disease, happily vanish as soon as the appropriate external stimuli are furnished to the desires and faculties of the poor dyspeptic Soul. As soon as it enters on a career of use, and forms, with the object of attraction, its Magnetic Circuit; healing, life, and divine consolations flow into it through that object, and the voice of consciousness whispers, "Thy Sins are forgiven thee."

Events of the Month.

DOMESTIC.

Political Summary.—The first month of the session of Congress resulted in the transaction of no important business. After the Christmas holidays, a more earnest attention to the duties of legislation was exhibited in that body, but thus far no measures of general interest have been adopted. A good deal of time was spent by both Houses in coquetting with the question concerning the reception of Kossuth, which was finally voted by a handsome majority. In accordance with the etiquette prescribed in solemn conclave by our national legislators, the illustrious Hungarian was invited to the floor of the Senate and of the House of Representatives, where he was welcomed with cold official civilities, in striking contrast with the spontaneous enthusiasm of the people.

A petition has been presented to the Senate by the New York Industrial Congress, praying that on account of the flagrant usurpation of power by Louis Napoleon, all relations between the United States and the French Republic should be suspended. This called forth a debate of considerable interest; but the proposal was at length laid on the table by a decided vote.

The subject of restoring corporal punishment in the Navy has been debated in the Senate. The advocates of flogging contended for its utility as an essential means of discipline, necessary to the maintenance of order on board a man-of-war, and indispensable to the efficiency of the service. On the other hand, it is contended that this barbarous practice is as useless as it is unjust; that it crushes the spirit of the sailor; destroys his self-respect, and is a gross outrage on the rights of an American citizen. Among the most earnest opponents of the measure is Com. Stockton of New Jersey, who in a speech, replete with eloquence and patriotism, declared that all his experience in the Navy had convinced him both of the impolitic and injurious character of the punishment in question.

The State Legislature of New York was organised on the 6th of Jan. James C. Heartt (Whig) was elected Speaker of the House by a small majority. Ira P. Barnes (Dem.) was chosen Clerk of the Senate by a majority of one.

The Message of Gov. Hunt gives a favorable view of the financial condition of the State. The amount of the public debt is less than $22,000,000, while the revenue of the Canals is over $3,700,000. This sum, after paying interest on the Canal Debt, with a portion of the principal, to the amount of $1,165,000, and $200,000 on account of the ordinary expenses of Government, leaves a surplus of $950,000 for the completion of the Public Works. The School Fund of New York exceeds $6,500,000, which added to the productive value of the Public Works, makes a total of more than $50,000,000 against a debt of less than $22,000,000.

During the past year, the number of children in the Common Schools has been 726,291, with an average attendance of about 600,000. The total expense for Teachers' Wages and School Libraries has amounted to $1,432,696, or about $2¼ for each pupil.

The Legislature of Massachusetts convened on the 7th of Jan. Henry Wilson (Free Soil Coalitionist) was elected President of the Senate by a majority of two, and N. P. Banks, the Coalition candidate, was chosen Speaker of the House by a majority of ten.

No choice of Governor being made by the people, George S. Boutwell has been elected by the Legislature.

The Pennsylvania Legislature met on the 6th, and after eight ballotings, elected John H. Walker (Whig) Speaker of the Senate, and John S. Rhey (Dem.) Speaker of the House. Gov. Johnston's Message speaks of the diminution of the public debt, which has been reduced from $40,842,379 to $40,114,236 since Dec., 1848.

The Maryland House of Representatives have passed resolutions welcoming Kossuth to the State Capital, but repudiating the doctrine of intervention.

The Maine House of Representatives have passed a resolution in relation to the intervention of Russia against Hungary, desiring the General Government of the United States to exert an influence in some wise and proper manner, against such intervention in future.

Progress of Kossuth.—The reception of the great Hungarian in Philadelphia and Baltimore, after his departure from New York, was of the most cordial and enthusiastic character. Upon arraiving at Washington he was welcomed by a number of public functionaries, and afterwards was honored with a public reception in both Houses of Congress. At a private interview with the President, he was informed that the policy of the Government with regard to its relations with Europe, had been uniform from the beginning; that the views of the executive had been freely expressed in the recent Message to Congress; and that no deviation from these views could be expected.

The most important speech which the presence of Kossuth in Washington has called forth is that of Mr. Webster at the Congressional Banquet. The distinguished statesman took strong ground in favor of expressing the sympathy of the nation with the struggles of Hungary.

The correspondence between Captain Long and Kossuth, which has given rise to so many rumors, has not yet been published. The substance of it is thus stated by a reliable authority:

"Before the Mississippi arrived at Spezzia, it had transpired that it was not Kossuth's intention to go direct to the United States to remain, but that he only intended a visit for the purposes he has disclosed since his arrival here; and when informed that the policy of the United States was non-intervention, he said he would feel inclined not to go to

the United States at all. He desired not to go to receive mere personal homage, but was aiming only at the freedom of his country.

"This avowal was transmitted from Spezzia in hightened colors, and reached Marseilles before or simultaneously with Kossuth's arrival, and was a cause of the obstructions he met there.

"After he had gone on shore under the guaranty of the consul that he would hold himself obedient to the determination of the French authorities in relation to a passage through France, the excitement arose in that city, of which the public are already apprised. Owing to the events which occurred, the consul addressed a note to Captain Long, that he feared the proceedings were compromising the flag of the country, which note Captain Long showed to Kossuth.

"Kossuth, looking upon this as an official act of the consul, replied, and took a different view of the case, assuming that demonstrations of such a nature would not be looked upon with any disfavor by the American Government.

"He then stated that, being unwilling to be in a position of disagreement with the American authorities abroad that might involve them in any embarrassment, he would leave the ship at Gibraltar, and proceed to England, and thence by private conveyance to the United States, and leave it to the future to decide on the justice of his views."

Kossuth left Washington on the 12th of January for Annapolis, and was received by the Legislature the next day. On the 14th he started for Harrisburg, on his journey to the West.

Burning of the Congressional Library.—The Library of Congress was partially destroyed by fire on the 24th of December. The fire was discovered by a watchman at half-past seven in the morning—the flames were first seen at the center-table, sweeping round to the northwest shelving—a few buckets of water would then have suppressed the fire, but before they could be procured the entire library was in flames. It contained 55,000 volumes; about 20,000, which were in an adjoining room, were saved. All the fixtures were destroyed, and the loss is estimated at over $200,000; but some of the works can never be replaced. The dome at one time was in imminent danger, but this and the two chambers of Congress are uninjured.

Sixty Years Ago.—Sixty-nine years ago, the 4th Nov., a party of adventurers from the Eastern States, after a long and toilsome journey, descended the Ohio River, and encamped upon the spot where Newport Barracks now stand. They were separated for the several "stations" in Kentucky, and turned their steps through the wilderness, first pledging each other to meet upon the same spot, or such of them as might survive, in fifty years from that day. The agreement was made on the 4th of November, 1782. In the year 1832, on 4th of November, precisely fifty years after the time of the agreement, four of the old band met upon the spot to fulfill the promise! One of them was over ninety years of age; and the rest were under three-score-and-ten. After remaining a few days, they turned their steps homeward; not through a wilderness as they did half a hundred years before, but through scenes of busy life, and the hum of industrial millions; nor did they promise another meeting, as that was an event fixed by a higher will; and it has taken place! They are all dead!

It is said that Mr. Webster has nearly ready for the press a History of the Administration of Washington.

More Gold in California.—The latest advices from California confirm the accounts previously received of a rich discovery of gold at Bear Valley. At a depth of not more than twelve feet, it is said that an amount of $400,000 has already been realized. The greatest excitement on the subject prevails throughout the whole vicinity.

The gold is extracted from a vein of quartz and slate, so perfectly decomposed as to admit of being reduced almost to a powder by the hand. The vein is found from 25 to 30 feet below the surface, and the discoveries up to the 24th inst. had not shown greater width of vein at any point than six inches. The earth found on a level with this vein is thoroughly impregnated with gold, which may be accounted for by the reasonable supposition that the work of decomposition had been completed.

Much earth, decomposed quartz and slate has been taken out, which paid 50 per cent of gold (a pound of the mixture yielding one-half a pound of gold.) The average may be safely computed at 25 per cent of gold. With the smallest degree of experience, from $500 to $600 per day for each man can be easily realized.

The first discovery was as follows:—

It seems that a party of Sonorians, numbering some seven or eight persons, had been prospecting in the valley for three or four weeks, and as no evidence of success was manifested, they were not interrupted by an accession of Americans, but pursued their own course without attracting any attention until the amount of gold obtained became so large that further concealment of their gains was utterly impossible. The news spread rapidly, and in the short space of *four days*, Bear Valley, numbering some forty or fifty souls previous to these discoveries, became a place of 3,000 inhabitants, some hundred dwelling-houses, eight or ten stores, and the usual number of gambling and drinking saloons. A town was laid out, mapped and subdivided into streets and squares, within twenty-four hours from the setting in of the first great tide of emigration, each *hombre*, of course, possessing a town lot. So much for American enterprise.

Very extensive limestone and marble formations have recently been discovered in this State, on the American River, within thirty or thirty-five miles of Sacramento. It is said to be of excellent quality, and is so situated as to be of easy transportation. The value of this discovery (which has been made public by Dr. Trask, who is engaged in a geological survey of the State) can hardly be appreciated by our Atlantic citizens. Stone for building purposes is brought from the Atlantic ports, from Australia and China, and meets with ready sale.———Volcanoes have been discovered to exist in the Sierra Nevada mountains by a gentleman who was on an exploring expedition.———A new and most important enterprise has been engaged in by a number of gentlemen in San Francisco—the establishment of a "California Institute." It is destined to be the foundation and repository of the historical and scientific discoveries of California, as every pains will be taken to secure all that is rare in history, art, or science. Already a considerable library has been collected, and means have been taken to secure further additions, as well as the leading journals of Europe and America.———The social and moral condition of California is daily improving. Churches are being erected in the interior, and are increasing in number in San Francisco. Much is owing in this respect to the very large increase, during the past few months, of our female population.

Railroad Accidents.—The daily papers are constantly recording the occurrence of serious disasters on the various railroads in almost every part of the country. Indeed, they are too numerous for us to find space for them in our monthly summary. We, however, are happy to present an effectual preventive to these calamities, in the following statement of a correspondent of the *Tribune*, who, after describing what superintendents and conductors should be, thus continues:—

"Such men can be obtained; perhaps not at the lowest market price, but at prices somewhat equivalent to their required capacities, and nominal, the value of life, limb and property considered. But how? *By the aid of Phrenology*, and not otherwise. Humbug! cries a host of young and old fogies, who are not only constant travelers, but stockholders—humbug!

Gentlemen, if you are satisfied to risk broken bones, life even, upon the security of after *punishment* for inattention, carelessness, recklessness on the part of an employee whose mental organization qualified him to effect a catastrophe calculated to produce such results—allow me to say that there is a large and increasing amount of mind which desires no such peril; recognizing, as it does, that with *proper* employees, collisions, switching off, &c., would seldom, if ever, occur, and that the greater portion of other catastrophes, which now involve such heavy loss of life and property, could be prevented by stringent precaution.

A railroad superintendent should be a man of the highest order of practical talent; possessing the following manifestations:—Health, good. A Total Abstinent from intoxicating and stimulating drinks. Temperaments—Mental, Vital, Motive, *large*. Activity, ditto. Head not less than 23 inches. Mental Manifestations—Caution, Comparison, Causality, Time, Calculation, Order, Constructiveness, Conscientiousness, Firmness, Self-Esteem, Combativeness, Eventuality, Individuality, Locality, Form, Human Nature, Suavitiveness, Benevolence, all *large*. Veneration, Hope, Destructiveness, Size, Weight, *full* to *large*. Approbativeness, Language, *full*. Acquisitiveness, Secretiveness, Continuity, *average* to *full*. The other manifestations would,

with the above, generally harmonize; seldom interfere.

A conductor should possess—Good Health. Be a Total Abstinent. Temperaments—Mental, Vital, Motive, *large*. Head not less than 22½ inches. Mental Manifestations—Caution, Conscientiousness, Comparison, Causality, Firmness, Self-Esteem, Eventuality, Individuality, Locality, Form, Order, Human Nature, Suavitiveness, *large*. Constructiveness, Combativeness, Benevolence, Veneration, Size, Weight, Calculation, Time, Amativeness, *full* to *large*. Destructiveness, Hope, Approbativeness, Language, *full*. Acquisitiveness, Secretiveness, Continuity, *average* to *full*. The other faculties to harmonize.

Such can be found—such alone should be employed. Such an one would *never* jeopardize the life of his passengers, nor the property of the corporation, while sane."

[We not only endorse the above, but submit whether the lives and property of our people would not be the better protected by requiring each and every officer to first undergo a Phrenological examination, by which to test his qualification, or adaptation to the business or place assumed; and if found wanting, let the fact be pointed out, and some other occupation recommended. It has come to be an every day affair for mechanics to select their apprentices for the various trades by the aid of Phrenology; then why not apply the same rule to men? In the hands of a judicious Phrenologist, a true and reliable opinon may always be obtained.]

Another Accident.—Another terrible calamity took place in New York on the night of Jan. 12th, which resulted in the death of six persons, several others being dangerously wounded. An alarm of fire was given in the street, which led the inmates of the house in which the disaster occurred, to suppose that the fire was their own dwelling. They rushed in great confusion to the narrow staircase, in order to make their escape, when they were precipitated to the bottom. The scene was one of the most distressing excitement.

Lectures on a New Plan.—A course of lectures on a new plan has been opened in this city, with a view to furnish the masses of the people with an attractive method of obtaining popular information. The course is delivered in the Broadway Tabernacle, the price of admission being only twelve-and-a-half cents. Several of the most eminent speakers are engaged as lecturers, and every effort is made to give a practical and substantial value to the course. It was opened on the 13th of January by Horace Greeley; and among other distinguished persons who have since delivered lectures, or are yet to do so, we find the names of Ralph Waldo Emerson, Henry Ward Beecher, Henry J. Raymond, Wm. D. Gallagher, Theodore Parker, E. H. Chapin, E. K. Kane, H. W. Bellows, and Horace Mann. This project of lectures at an almost nominal price by men of the highest eminence in their respective departments, is a genuine American idea. We note it as an encouraging sign of the times—another landmark in the great highway of progress.

Trial of the Fire Annihilator.—An experiment has been made in this city, to test the efficacy of Phillips's Fire Annihilator, which did not meet with the anticipated success.

In the center of a large square a cottage building was constructed of green spruce and pine boards, of about three-quarters of an inch in thickness. This structure was twenty-two feet in hight, making two stories, and twenty feet square. In the middle of the second story floor was cut a large hatchway or well-hole, through which were perpendicularly placed about a dozen wide pine planks, one end of which rested on the ground floor. About the bottom of these planks was piled a quantity of shavings well saturated with turpentine. The shavings were set on fire, and in a moment, almost, the flames communicated to the planks placed through the hatchway. Less than half a minute had elapsed, however, after the pile was fired, before four of the machines were brought to bear upon the flames. The gaseous vapor which poured from the machines almost instantaneously extinguished the flames. The vapor and smoke caused by the turpentine and shavings so filled the building that it was impossible to enter it. The windows of the first and second stories were smashed in by some of the workmen, and in two minutes thereafter the crowd poured into the premises, and even upon the roof of the wings on each side.

So little time had elapsed after the building had been fired and the application of the Annihilator, that the planks were scarcely charred. The crowd deeming the test very unsatisfactory, proposed to fire the premises themselves and give the experimentors a fair chance. An objection being raised to this proposition by the workmen, a general fight took place, which, but for the interference of the police, would have resulted seriously to some of those engaged in it.

The building was finally fired by the populace in several places, and before twenty minutes had elapsed, the structure was a mass of ruins.

FOREIGN.

The French Usurpation.—The great event of European interest since our last issue, is the usurpation of power by Louis Napoleon, and the consequent change in the condition of the French Republic. On the 2d of December a decree was issued by the President, announcing the dissolution of the National Assembly, and proposing certain measures to be acted on by the people, in their electoral colleges. According to the system declared, the laws were to be drawn up by a Council of State, and voted by a legislative body elected by universal suffrage, while the President was to be responsible Dictator for ten years. Under this arrangement there is to be no Constitution, of course. The whole power is vested in the President. The Council of State depends upon him, and, consequently, the laws proposed by that body to the Legislative Assembly will be such as he approves and none other. In short, the plan of government proposed by Louis Napoleon is the most complete despotism ever conceived by the brain of man. The plan thus concocted has been ratified by the people, sustained by an immense military power, and has thus taken the place of the nominal republic.

Resignation of Lord Palmerston.—An important change has taken place in the British Ministry by the resignation of Lord Palmerston as Secretary of Foreign Affairs. He is to be succeeded by Lord Granville.

The withdrawal of Lord Palmerston from the government is imputed to the dissensions which have been known to exist in the cabinet for several months past, and was probably precipitated by the significant reception and emphatic avowal of opinion to the Kossuth deputation, to whom his lordship used language by no means complimentary to the absolutists of Europe. The fearless position assumed by his lordship proved distasteful to a majority of the ministry, and hence the result.

Among the rumored causes of Lord Palmerston's secession from the cabinet, was that of a difference of opinion upon the abstract question of the French Revolution, though the mystery is not likely to be revealed before the meeting of Parliament.

The under-secretary, Lord Stanley, has also tendered his resignation.

Death of Priessnitz.—The death of Priessnitz, the celebrated founder of the Water-Cure system, occurred at Grafenberg, on the 28th of November. For the last year he had felt himself gradually sinking, and this winter, for the first time during a long period of practical life, he found himself obliged to limit his visits to the immediate vicinity of his residence at Grafenberg. Within a month before his demise, he showed symptoms of general dropsical complaint. He treated himself with the utmost clearness of mind, but entertained little hope of his eventual recovery. He said he should not live to see the spring return. Up to almost the very last day of his life, he continued to give his advice to those who sought him. His head was perfectly clear to the last, but he looked like a shadow, and without a smile any longer on his face.

He received every one who came to him, and gave his advice with an air of calm patience. The day before his death, after taking the "cure" he was seen sawing wood for exercise, in a warm room, and very warmly clad. Thus it is evident that the extraordinary will and the moral courage, upheld by faith in the hydropathic cure, which he had shown with regard to others all his life, was strong in him to the last. On the day of his death, Friday, the 28th of November, his symptoms became aggravated, he grew weaker and weaker, and about five in the afternoon he laid himself on his bed, without any assistance, and in one minute afterwards he breathed his last. He was only fifty-two. In early life he received serious injury in the chest from an accident, and he used to say himself that his constitution was bad; that nothing

but his own mode of life and his own "cure" would have sustained him.

The whole place had been thrown into consternation as the news spread of his rapidly approaching death. The inhabitants of Freiwaldau thronged up to Grafenberg—all the sledges available were following each other up the steep snow-covered road, soon to descend again with the news that Priessnitz was no more. It can scarcely be conceived the strange blank these words seemed to leave on the mind. Suddenly the center that held all together had vanished—Freiwaldau seemed to have shrank again in a moment into the obscure and remote village it was before Priessnitz's name was heard of.

It is not exactly known what amount of property Priessnitz has left, but it is supposed to be nearly £100,000. When it is considered how small, compared to that given to other physicians, was the remuneration he took from his patients, and when it is remembered that, thirty years ago, Priessnitz was a poor peasant, this fortune gives some measure of the immense success that has attended him.

A more detailed sketch of the life and services of this extraordinary man may be found in the *Water-Cure Journal* for the present month.

Fredrika Bremer arrived at Stockholm on the 22d of November last, in season to be present at the funeral of her elder sister, Miss Marie Bremer, from whom she inherits a very large fortune.

Australian Gold.—Capt. Erskine, R. N., has published an account of the discoveries of gold in Australia, from which it appears that the largest piece of gold in the world, weighing 106 pounds, was obtained at a spot about 53 miles from Bathurst, and the effect was such as to silence all the attempts which had still been kept up to oppose the movement. The introduction of improved machines and processes for amalgamation also tended greatly to increase the returns.

Turner, the great English landscape painter, died at his residence, No. 47 Queen Anne-st., London, on Friday, December 19, aged 76. He was never married, and leaves a very large fortune made by his art; he was the son of a barber. His finished oil paintings have latterly ranged in price from $3,500 to $7,000.

The Admiralty have determined not to send another expedition in search of Sir John Franklin by way of Behring's Straits. The Plover is to be communicated with each year by a man-of-war—the Amphitrite is the next.

Terrific Water-Spouts.—Two enormous waterspouts, accompanied by a terrific hurricane, have swept over the island of Sicily. Those who saw, describe them as two immense spherical bodies of water, reaching from the clouds, their cones nearly touching the earth, and, as far as could be judged, at a quarter of a mile apart, traveling with immense velocity. They passed over the island near Marsala. In their progress houses were unroofed, trees uprooted, men and women, horses, cattle, and sheep were raised up, drawn into their vortex, and borne on to destruction. During their passage rain descended in cataracts, accompanied with hailstones of enormous size, and masses of ice. Going over Castellamare, near Stabia, it destroyed half the town, and washed 200 of the inhabitants into the sea, who all perished. Upward of 500 persons have been destroyed by this terrible visitation, and an immense amount of property, the country being laid waste for miles. The shipping in the harbor suffered severely, many vessels being destroyed, and their crews drowned. After the occurrence numbers of dead human bodies were picked up, all frightfully mutilated and swollen.

Earthquake in Turkey.—A shock of an earthquake was felt on the 12th of October, at Berat, in European Turkey. It threw down part of the fortress, and 400 soldiers perished in the ruins. About 800 houses, a Greek church, and two mosques were greatly injured. When, after the disaster, the population was counted, 800 persons were missing, but many of them were supposed to have taken to flight. The upper part of a mountain near the town became detached, and was cast a considerable distance; a crater then opened in the center, and vomited black smoke and blocks of stone; this was followed by a sulphurous lava in a boiling state, which subsequently turned to powder. Fetid exhalations arose, which corrupted the air. The villages near Berat also suffered greatly from the earthquake. At Salonica, on the 30th and 31st of October, shocks were felt. They came from the north to the south, and lasted several seconds. The sky was covered at the time. The first shocks were slight, the latter stronger, but it is not stated that they did any damage.

Boston Notions.

Labors of a Philanthropist.—Rev. John M. Spear, the well known and devoted friend of destitute prisoners, who under the smoke of crime loves to detect sparks of humanity worth saving, informs the newspapers, in a note, that "during the year 1851 he assisted 356 persons, by furnishing them with food, clothing, lodging, employment, counsel, &c.; traveled to assist prisoners, and to deliver lectures, 7,160 miles, in Massachusetts, Maine, New Hampshire, Vermont, Connecticut and New York; made 70 prison visits; delivered 79 lectures on Prisons and Crime, its Causes and Treatment; distributed among prisoners and others, 6,000 publications; and became bail for prisoners to the amount of $10,000."

Lectures.—The Mercantile Library, the Mechanics', Apprentices', and other stated society courses are constantly crowded; and as you mingle with the throng in Washington-street, almost every evening about 9 o'clock, you may hear young men and maidens discussing the relative merits of Whipple, Chapin, Giles, Doctor Holmes, and other literary lions, who have been giving them their best thoughts. Although the public interest in lectures is far from being as absorbing as it once was in Boston, owing to the growing taste for various artistic exhibitions, particularly Music.

Mrs. E. Oakes Smith has been exciting much attention, and winning golden opinions in Nantucket, New Bedford, and other places.

The course of Phrenological lectures in the Tremont Temple, by Messrs. O. S. & L. N. Fowler, has been successfully completed. The audience was very numerous and constant, and we hear on all sides grateful acknowledgments of the wise, and practical, and friendly instructions about ourselves, and the true way of keeping and improving ourselves, physically, mentally, and socially, received at these lectures.

R. W. Emerson's lectures on the *Conduct of Life* attest, likewise, in subject and treatment, the demand of the age for *practical* wisdom, though it be transcendental at the same time. His audiences have been larger and larger, and such as it is an inspiring pleasure to sit among; so much intelligence, original character, refinement, culture, and humanity, is rarely concentrated by the magnetism of one original man. Everybody speaks of the eminent practicality of these lectures, especially the third and fourth, of which the themes were "Wealth" and "Economy." There is an exquisite wit, as well as wisdom, in his sententious lessons, and *ad hominem* illustrations. Everybody leaves in good humor, though nobody escapes unhit; and you go away more serious, and more hopeful from these truly poetic oracles, not of sentimentality, but of *hard fact*.

Concerts and Oratorios.—To undertake to characterize the winter life of Boston, especially *this* winter, without speaking of its music, would be to omit one of the most prominent and permanent features. Music is a part of the daily air and food of a cultivated Bostonian; and the same is measurably true of the suburban circle, which, thanks to railroads, includes places as far off as Worcester and New Bedford. Lectures and theaters, in turn, have been "the rage;" it is now music; music of all forms and grades, from "Hutchinson families" and "Sable Minstrels," up to the symphonies of Beethoven. Especially has the taste for classical instrumental music been developed of late years. No places of resort are more eagerly and constantly attended by the cultivated classes, especially the young ladies of Boston, than the weekly afternoon rehearsals of the "Musical Fund" Orchestra, where, for a very small expense, they hear and become familiar with the great symphonies, overtures, &c., of Haydn, Mozart, Beethoven, and Mendelssohn. From 1,200 to 1,400 persons are frequently present at these rehearsals, and constitute the genuine nucleus of a permanent musical public; the concerts, six or more in number, draw an audience of 2,000. The same, to a great extent, is true of the weekly rehearsals and concerts of that select and model orchestra, the "Germania Musical Society." Then, again, the "Mendelssohn Quartette Club" has its afternoon rehearsal, and its bi-weekly concert of choice "Chamber Music," where the purest and most artistic compositions for stringed instruments, the quintessence of the art of the great masters, are regularly enjoyed by an, of course smaller, but most constant and devoted, audience. Here are three afternoon opportunities

per week, and as many in the evening, of drinking at these fountains of harmonious inspiration; *all* of which are diligently cultivated by some of the self-improving daughters of Boston.

To this add the great sacred oratorios of the 'Handel and Haydn" and the "Musical Education" societies, which, with their choruses of 200 voices, produce the "Messiah," the "Sampson," the "St. Paul," &c.; also the occasional concerts of traveling vocalists and instrumental virtuosos, most of which are well attended; and it is plain that music must be set down as one of the most absorbing and least transitory "notions" of the city of the Puritans. All this is natural fruit of music in the public schools, of annual "Conventions" of music-teachers, &c., &c.

Boston, too, has native products in this line to boast. The two last weeks have witnessed two very interesting occasions, where public sympathy was largely called out. One was a benefit concert to raise an education fund for a Boston girl of rare voice and talent, "Miss Adalaide Phillips," who goes to perfect her gift among the best teachers in Europe. The other was the welcoming back in a similar way, by a most crowded and enthusiastic complimentary concert, of another Boston girl, who has returned a finished artiste, and singer of the first rank, as Madame Biscaccianti.

School of Design for Women.—This institution, as yet in its infancy, realizes, so far, the most sanguine expectations of its founders and patrons. Since our last month's notice, the number of pupils has increased to *eighty-five*, and the directors are obliged to decline further applications for the present. To the admirable instructions of Mr. Whittaker, in the principles and art of design, lessons in coloring, in wood engraving, and in botany have been added. As the number of pupils increases, employment already awaits some of the most advanced and gifted of their number, in the capacity of assistant teachers. And we are told that the advanced classes will soon be able to supply orders for manufacturers for original ornamental patterns. Who will not rejoice when our sisters can support themselves, in this rough, competitive world, by their innate taste and talent for the beautiful!

Varieties.

The Hutchinsons.—This favorite "band of brothers" have, within the last month, been winning golden opinions from the lovers of their unrivalled home-songs in this city and Brooklyn. Like the bird-songsters, we hope they will pay us their annual visit, and like them stay at least half the year. They are as good as new, and grow better by age.

Agriculture and Horticulture.—Our department devoted to this, the primitive occupation of man, during the past year has elicited unusual attention, pleasure, and profit in great numbers of our readers. On this subject, S. A. Barrett writes us as follows:—

Messrs. Fowlers and Wells:—Right glad am I that a portion of your excellent Journal is devoted to the noble and useful arts of Agriculture and Horticulture. The improvement of the soil is as well worthy, and as justly claims the attention of the patriot, the philanthropist, and the philosopher, as the improvement of the mind; for he who originates a good *fruit*, or causes grass or grain to grow where nothing useful grew before, is as much a benefactor as he who originates a new thought, or a new science; and is far more deserving the gratitude of mankind than he who retails either metaphysical absurdity, abstract philosophy, or theological mystery, from the press, the pulpit, or the forum.

It is matter of gratulation, and argues a better future, that the twin arts, Agriculture and Horticulture, are rapidly receiving accessions from the higher ranks of society. The philosopher and statesman retire to their farms; the poet seeks the retirement of rural life, and the votaries of commerce and science follow their example. Hence, a new impetus is given to both; a spirit of emulation has risen, and more grain, and grass, and cattle, and *better*—and more of the luscious and lovely fruits, and *finer*, are the result. And men are fast learning that fruits and vegetables are cheaper and healthier food than meats; and, whether its philosophy *is*, or is not understood, a world of good is the inevitable consequence; for, is it not true that the noblest and most useful of animals are herbivorous? and does not the *cause* apply with equal truth to the human family? I believe that it does: and thus believing, I hail with much pleasure an auxiliary so influential and valuable as the "Journal;" and the *fact*, that its senior editor is a *practical* agriculturist and votary of Pomona, *adds truth to its tone, and force to its truth*. Few men may claim so extensive an acquaintance with fruit as he, and none enjoy it with a keener relish. In his rural retreat at "Bird's Nest," he is perfectly "at home" in his fruit gardens and orchards, and will discuss Phrenology or fruits with equal intelligence, facility, and pleasure.

KOSSUTH.

[The accompanying engraving represents the general appearance of the man of the age in his native costume. We expect, at a future time, to present our readers with a chart of his Phrenological developments. At present we copy a few interesting paragraphs from the *Home Journal*, which will please our readers.]

"In Hungary, while the contest lasted, Kossuth's cue was to act, rather than talk. *How* he acted—with what courage, constancy, energy, wisdom, faith, foresight, *success*—the world knows, and posterity will know and wonder at.

"In his exile, the Tongue, and its ally, the Pen, with their common instrument, the Press, are all the weapons left to him. People regard it as a point for special admiration, that, with these alone, he is, at this moment, the most dreaded—certainly the most dreadful—foe of three despots, intrenched behind a million-and-a-half of bayonets, 'beginning to think.' Within a 'little month,' Kossuth may be at the head, not of 'my poor Hungary' merely, but of maddened Europe, united in devotion to him, and inextinguishable hatred to them. Presenting himself to us, as he necessarily does, by his speeches only, we have to mention—and little more than mention—the characteristics of those wonderful efforts which have called forth most remark.

"The knowledge which his speeches contain, and the *tact* with which it is used, excite general astonishment. Kossuth's life has been an active, not a studious one, but his knowledge of men, of history, science and literature seems universal. He knows, not merely that part of a nation's history which *is* universal, but also what is so peculiar that it usually is known only to itself. A score of instances of this particularity of information will occur to every reader. He has addressed, in this country, statesmen, lawyers, clergymen, students, ladies, workingmen, children, Germans, Africans, Irishmen, and other equally distinct classes; and to each he has said precisely the most appropriate things, *reminding* each of its special history, hero and aim.

"Eastern blood, as he tells us, flows in his veins, and it flows with *down-eastern* velocity and power. What Kossuth, and what his career would be, if he were as physically perfect as he is mentally capable, the imagination alone can conceive. He might accelerate history, making the next ten years do the work of an ordinary hundred.

"It is the general conviction that, as a mere man of *talent* Kossuth has few living equals. Up to the time when he went on board of the Mississippi, he had, as far as has yet appeared, never used his knowledge of our language in public speaking, nor, to any extent, in conversation. His English speeches, notwithstanding, with slight touches, here and there, by a competent hand, would be models of English composition. He frequently employs the most *English* English, the idioms, the current quotations. There is amazing talent in this, as well as in the quickness with which he seizes oratorical opportunities as they arise.

"With so much brilliancy and readiness, so much imagination and wit, people are surprised at the solidity, depth, and Websterian breadth of *comprehension* displayed in the speeches. We point to the speech at Philadelphia, upon the late fantastic tricks of Louis Napoleon, as a fine example of these qualities.

"Kossuth's unlikeness to any historical person has been much remarked upon. With Washington he has nothing in common but the *cause*. He reminds us of but two great men now passed away—Napoleon Bonaparte and Peter the Hermit. The former he resembles in his magnificent genius for 'handling the tools,' by which mighty movements are started, controlled and directed; the latter in his eloquence, in his power of kindling enthusiasm for an abstract principle, in his present poverty and peculiar mission among the free nations, and in the kind of effort which his eloquence is likely to call forth. Three months ago, when Kossuth began to speak, as no man has spoken since the Crusades, we were as unprepared to receive his doctrine as Europe was to march to the Holy Land, when Peter delivered his first harangue. But he has kindled such a flame for liberty and international fair-play, that the *people* are already with him. Another year may witness a new and nobler crusade, of which poor Hungary shall be the Holy Land."

General Notices.

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TO BOOK AGENTS AND OTHERS.—Fowlers and Wells, Publishers, 131 Nassau-street, N. Y., will furnish, in large or small quantities, all works on Phrenology, Physiology, or Hydropathy; also on the various reforms of the age. Among others, works on Phonography, Education, and the Natural Sciences generally. Catalogues may be had on application. The most liberal terms offered to agents. For particulars, address as above.

DEFERRED ARTICLES.—Among the numerous articles which press upon our columns, we have an elaborate article from the senior editor, on Phonography, which we are obliged to lay over to the next number; also, "Individual Responsibility," to be concluded; "Emigration," "The Progress of Truth," "Circumstances," "Offshoots." Our correspondents must exercise the virtue of patience.

THE RIGHT WAY.—When we write a letter to a person requiring an answer, we inclose an *envelope*, with a postage stamp upon it, *addressed to ourselves*. Then all that a "person" has to do, is simply to furnish paper, write the answer, enclose the same in the aforesaid pre-paid envelope, and *return* the same to us. This usually insures a prompt answer, and subjects the person to very little trouble or expense. If all people would adopt this plan, it would be a great saving, for when answers to letters are not pre-paid, the amount of postage is *five* instead of *three* cents. When a person writes a letter to another, on his own business, requiring an answer, he should prepay the same both ways.

THE MAINE LIQUOR LAW—beautifully printed in Eight 12mo pages.—Regarding this document in the light of a godsend, and feeling desirous of giving it the widest possible circulation, and at the smallest price, the publishers of the PHRENOLOGICAL JOURNAL have stereotyped and printed an edition of 20,000 copies, which they will sell in packages at first cost, namely: for packages of one hundred copies, $1; packages of fifty copies, 50 cents; packages of twenty-five copies, 25 cents; packages of one thousand copies, $10.

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A NEW EXPRESS COMPANY.—Besides the three old and well established companies of Harnden & Co., Adams & Co., and Kinsley & Co., a new company has just been organized under the name of NICHOLS & Co. The vast increase of business and of travel between New York and other cities, furnishes ample employment for all these great express companies, whose services are now quite indispensable. The new company have offices at 14 Wall-street, New York, and 18 Congress-street, Boston; and branch offices in New Haven, Hartford, Springfield, and Worcester, and will forward packages by railroad over that route, leaving New York and Boston daily, at 8 A. M. and 3½ P. M., delivering parcels in either city the same day, and on the morning of the next day, when sent by the evening or 3½ P. M. train. This, we believe, is an improvement on either of the old companies, and will insure success to the new. At another time we shall give the routes of all the express companies, running in and out of this METROPOLIS, for the benefit of our friends who may wish to avail themselves of these incomparable facilities.

To Correspondents.

S. P.—We would recommend you to try the water-cure.

H. FAIRCHILD.—We can furnish all the back volumes of the Journal, except the third and fourth, and the volume for 1851.

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New Publications.

Clovernook; or, Recollections of our Neighborhood in the West. By ALICE CAREY. 1 vol., 12mo. New York: J. S. Redfield.

This may be regarded as one of the most admirable volumes in our literature from the hand of a woman. Indeed, neither man nor woman has ever painted with more naturalness of grouping and exquisite skill of coloring the domestic life of the farming classes in the West. The "upper ten" have had abundance of historians, and the gay and fashionable world has continually been chosen for illustration by literary men of almost every grade. The "country people" have now a classic of their own, exhibiting their own West life, by a woman of genius who has lived among them, and thoroughly appreciates their character. In humor, tenderness, pathos, and dramatic force, Clovernook is the book of the season.

Hand-Book of the Useful Arts; including Agriculture, Architecture, Domestic Economy, Engineering, Machinery, Manufactures, Mining, Photogenic and Telegraphic Art; being an Exposition of their Principles and Practice, and a Compend of American and European Inventions. By T. ANTISELL, M. D. New York: G. P. Putnam.

In his preface the author remarks:—

"The aim and scope of this volume is perhaps sufficiently indicated in the title-page. It is intended to comprise, in a clear and comprehensive form for popular reference, a dictionary of all terms used in the application of science to the useful arts. It is believed that a manual of this kind—sufficiently full in its details for ordinary purposes, and accurately posted up to the present time, yet in a comparatively moderate compass—will meet a very important want in this country, which is yet unfilled by the large and more expensive works already before the public."

This book should be found in every man's library. As a work for reference, it is without an equal.

Western Portraiture and Emigrants' Guide; a description of Wisconsin, Illinois, and Iowa, with remarks on Minnesota and other Territories. By DANIEL S. CURTIS. New York: J. H. Colton.

Some three hundred and fifty well printed 12mo pages, bound in muslin, with a large map of the States and Territories described. To those seeking a "home in the West" this hand-book would be of great service, aiding them in determining where, when, and how to select a suitable place to settle. Price of the book, $1.

Lectures on the American Eclectic System of Surgery. By BENJAMIN L. HILL, M. D. With over one hundred engravings illustrating the practice of Surgery. 8vo. pp. 671. Price $3.50. For Sale by Fowlers and Wells, New York.

A work printed on good paper and large, clear type, it has several features with which we are decidedly well pleased.

It treats all its subjects in a plain, straightforward manner, as if the common mind was being addressed, and, while it displays learning and experience, it is not veiled in the stately obscurity of technical language.

It may also be regarded as of a decidedly reformatory character in its teachings, and is free from that professional pride and that ridiculous adhesion to old notions, and that fear of something new, which pervades nearly all works of this character.

The author has done a good service for the cause to which his work is devoted, not only as respects the student of Medicine and Surgery, but also the common reader.

The Philosophy of Justice between God and Man. By BENJAMIN BLOOD. New York: John S. Taylor. 12mo. pp. 290.

This is the first, or among the first efforts in book form, of a young candidate for fame, who possesses considerable talent and a decidedly critical and metaphysical cast of mind. If we cannot in all respects follow his arguments and conclusions with our assent, yet we admire the courage and independence which he evinces in daring to call in question some of the doctrines and philosophical speculations of some of the great minds of the past. "Great men," we have read in the book of Job, "are not always wise," and it is not certain but what our young author has started some strictures on the teachings of Edwards and others, that wise heads in the present and future ages will pronounce to be correct.

We are not very fond of the Gordian knots of abstract metaphysical subtleties in which our author deals, or of the writings of those whose notions of a similar character he labors so zealously to prune of what he regards as erroneous, nor are we quite sure that he makes out a clearer case than did those whom he calls in question for their theoretical errors.

Many old theological writers, in discoursing on the doctrines of "necessity," "free will," "moral liberty," &c., always appeared to us to reason in a circle, and to alternately transpose the conditions of cause and effect. This inconsistency, in more than one instance, our author shows up in excellent style.

"The Philosophy of Justice" contains many bold, clear, and earnest thoughts, and will repay perusal. He gives a very good chapter concerning "the difference in minds," in which he endorses and very clearly argues the doctrines of Phrenology, which, when we are less pressed for room, we may give to our readers.

Summerfield; or, Life on a Farm. By D. K. LEE. Auburn: Derby and Miller. New York: Mark H. Newman and Co.

This is one of the most unexceptionable tales which we have met. If our people cannot find enough to read among the mountains of books on the natural sciences or the arts, then we would recommend this and kindred works. Should the writer turn his attention to subjects of *real utility*, he would soon distinguish himself as an author, and be the means of doing great good in the world.

A Wreath around the Cross; or, Scripture Truths Illustrated. By REV. A. NORTON BROWN. With a Recommendatory Preface, by JOHN ANGELL JAMES. Boston: Gould and Lincoln.

A very handsomely printed book of about 300 12mo. pages. It is divided into sections, under the following titles:—

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Not having read this book, we cannot say whether or not the author has given us a correct interpretation of this much used term. It is evidently a cross to deny *any* of our faculties their legitimate gratification, and when one faculty quarrels with another it is a cross. It is equally a cross for the *animal propensities* to be kept in subjection to the *moral sentiments*, when the former greatly predominate. It is a cross for Acquisitiveness to yield to Benevolence, or for Benevolence to yield to Acquisitiveness. So of all the faculties. But we are blessed with intellect and moral sentiments, the office of which is to direct us when, and when not, to "take up the cross." It is no cross to do our duty, when the doing it gives pleasure to *all* our faculties.

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THE PHRENOLOGICAL JOURNAL is published in New York, on the first of each month. It is devoted to SCIENCE, LITERATURE, and GENERAL INTELLIGENCE.

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THE NEW YORK TRIBUNE, DAILY, SEMI-WEEKLY, AND WEEKLY.—The year 1852 commences with events of more than usual importance, and it is certain that other events, equally momentous, will mark its entire duration.

The proceedings of Congress, its discussions and action upon the great questions of our Foreign Policy, the Tariff, the extension of our lines of Steamers to the Sandwich Islands, Asia and Africa, the opening of a Railroad to the Pacific States and Territories, &c., will be watched with the deepest interest.

The Presidential Election takes place this year. The movements of both the great parties, the Conventions, the nominations, and the canvass will engage to an unusual degree the attention and the feelings of the country.

The acts and speeches of the distinguished Hungarian Leader and Exile, and the approach and possible outbreak of a mighty convulsion in which all the nations of the European Continent will be involved, either on the side of Despotism or of Liberty, will be subjects of constant and eager interest.

The movements preliminary to this great convulsion, the intrigues of Russian diplomacy, the spasms of Austrian Despotism, French Revolution, the outrages of Italian rulers; and, on this side of the Ocean, Mexican insurrections, Californian Gold Discoveries, South American Civil Wars, will all add to the general sum of important events which will distinguish the year 1852.

All who desire to be promptly, thoroughly, and reliably informed on these matters will find their wishes met in THE NEW YORK TRIBUNE. Its arrangements for procuring early and accurate information are not surpassed either in extent or perfection by those of any journal in the world, and its readers may be assured that no expense or exertion will be spared to maintain, and even increase, its present completeness and utility as a newspaper.

In addition to the above named features, we shall regularly publish the Letters of BAYARD TAYLOR, one of the Editors of *The Tribune*, who is now exploring the unknown and mysterious regions of Central Africa, and before his return, will visit the famous Oriental cities of Damascus and Bagdad, and examine the ruins of ancient Nineveh.

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☞ Notes of all specie-paying Banks in the United States are taken for subscriptions to this paper at par. Money inclosed in a letter to our address, and deposited in any Post-Office in the United States, may be considered at our risk; but a description of the bills ought in all cases to be left with the Postmaster. G. & MCE.

OPINIONS OF THE PRESS.

THE NEW YORK TRIBUNE is one of the very best of newspapers in the world.—*Waynesville Visitor, Ohio.*

THE WEEKLY TRIBUNE.—Upon the merits of *The Tribune* it is unnecessary to enlarge, known as it has long been, as the model newspaper of the world, and the reading public of both this country and Europe, regard it as a journal in the statements and views of which the highest confidence may be safely reposed.—*Pittston (Penn.) Gazette.*

NEW YORK WEEKLY TRIBUNE.—Having had the reading of *The Tribune* more or less for several years, we can safely and honestly say, that of all "Whig," or "Democratic" papers with which we have become acquainted, this is decidedly the best. On all the great and absorbing questions of the day, the editor takes "high ground," far in advance of his party.—*Mount Pleasant, Iowa, True Democrat.*

THE NEW YORK TRIBUNE, published by Greeley & Mc Elrath, is one of the best newspapers published in the East. Persons wishing to take a city paper, could not make a more judicious selection than to take the *Tribune.*—*Herald, Oskaloosa, Ohio.*

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THE PHRENOLOGICAL BUST, designed for learners, showing the exact location of all the Organs, may be packed and sent by Express, or as freight [not by mail] to any part of the globe. Price, including box for Packing, $1 25. Address, post-paid, FOWLERS AND WELLS, 131 Nassau-street, New York.—Feb. tf.

MRS. M. THOMPSON'S PHRENOLOGICAL MUSEUM, 518 Broadway, Albany, N. Y., is open day and evening. Free to visitors, where professional examinations, with charts and written descriptions of character, may be obtained. FOWLERS AND WELLS'S Publications, and other Phrenological and Scientific books for sale.—Feb. tf.

PHONOGRAPHY taught by mail, in a course of from one to five letters. Terms, $1 per letter of instruction. For particulars address T. C. LELAND, No. 205 Broadway, New York. feb. 1t.

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PROSPECTUS OF THE PLOW, A MONTHLY CHRONICLE OF RURAL AFFAIRS. [Successor to the American Agriculturist.] Fifty cents a year! The cheapest agricultural periodical in America.

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Volume 1, No. 1. New York, January, 1852. Solon Robinson, Editor. C. M. Saxton, Publisher, 152 Fulton-street. Each number of THE PLOW will contain thirty-two pages imperial octavo, in double columns, the same size, and printed in the same clear beautiful type as the American Agriculturist. It will be published on the first of every month, 152 Fulton-street, New York, at fifty cents a year for a single copy, five copies for two dollars. Subscriptions commence with the year. No paper sent except paid for in advance. AGENTS, Postmasters, Editors, and all friends of improvement in Agriculture, and particularly the personal friends of the Editor, Publisher, and A. B. Allen & Co., will please act as Agents, for which they will be allowed all over 37½ cents per copy as commission. Remit by mail at the risk of the publisher. Direct to C. M. SAXTON, 152 Fulton-street, New York, and *prepay your postage.* The Editor's office is at the New York Agricultural Warehouse of A. B. Allen & Co., 189 and 191 Water-street, up stairs, where he will always be happy to see his friends from country or city. Office hours, 12 to 3 o'clock, P. M. A. B. Allen and R. L. Allen, late Editors of the American Agriculturist, will be regular contributors to THE PLOW. Also, Professor Norton, Dr. Antisell, L. F. Allen, and others, late Correspondents of the Agriculturist. POSTAGE.—The Editor and Publisher will make it a point of courtesy to pay postage on all letters; all sent to them should therefore invariably be prepaid. The postage of THE PLOW, according to the late act of Congress, is as follows:—Any distance within 50 miles of the city of New York, 1½ cents per quarter; over 50 miles and less than 300 miles, 2½ cents per quarter; over 300 miles and less than 1,000 miles, 3½ cents per quarter; over 1,000 miles and less than 2,000 miles, 5 cents per quarter; over 2,000 miles and less than 4,000 miles, 6½ cents per quarter; over 4,000 miles, 7½ cents per quarter. Under the cheap postage law, a single subscriber can remit a half dollars for THE PLOW.—Feb. 1t.

REMOVAL.—THE MORAND DAGUERRIAN GALLERY—established in 1840, and for the last five years located at No. 132 Chatham-street, has been removed to the beautiful "New Free-Stone Building," No. 65 Chatham-street, next door to the "Chatham Bank," and directly opposite Chambers-street. The public are respectfully informed that this establishment has been constructed expressly for the Daguerrian Art, and is second to no other Gallery in the United States for the artistic arrangement of the light, also possessing other facilities, both in the chemical and mechanical departments, unequaled. The "Reception Room" has been fitted up expressly in view of rendering every convenience both to ladies and children. AUGUSTUS MORAND, Principal Operator.—Feb. 1t.

B. F. MAGUIRE, DENTIST, successor to the late JOHN BURDELL, (with whom he was associated during five years,) continues to practice the DENTAL PROFESSION in its various branches as usual, at No. 2 Union Place and Square, corner of Fourteenth-street, New York.—Jan. 1y.

E. A. & S. R. FILLEY, importers and wholesale dealers in China, Glass, and Queensware, Lamps, Chandeliers, &c., No. 149 Main-street, St. Louis, Mo.—EDWARD A. FILLEY, SAMUEL B. FILLEY.—Feb. 2t.

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BLAKE'S PATENT FIRE-PROOF PAINT.—The original and only genuine article that can be sold or used without infringing my Patent, and which, in a few months after applied, turns to SLATE or STONE, forming a complete ENAMEL or COAT OF MAIL, over whatever covered, bidding defiance to fire, water, or weather. It has now been in use over seven years, and where first applied is now like a stone.

Look out for WORTHLESS COUNTERFEITS, as scores of unprincipled persons are grinding up stone and various kinds of worthless stuff, and endeavoring to sell it as Fire-Proof Paint. I have recently commenced three suits against parties infringing my rights, and am determined to prosecute every one I can detect. The genuine, either in dry powder or ground in oil, of different colors, can at all times be had at the General Depot, 84 Pearl-street, New York, from the patentee, WM. BLAKE. jan. 1t.

VAPOR BATHS.—John Hanna, of 86 Forsyth-street (near Grand) N. Y., will administer Vapor Baths daily, from 9 A. M. to 10 P. M. A female will be in attendance to wait on Ladies.—Nov. tf. b.

SELPHO'S Anglesey Leg and Artificial Hand, manufactured by WILLIAM SELPHO, 24 Spring-street, New York. dec.1y

82 NASSAU-STREET.—Boot-makers' Union Association—boots, shoes, and gaiters at retail and wholesale prices. f.9t.

DR. S. B. SMITH'S TORPEDO ELECTRO-MAGNETIC MACHINES.—These Machines differ from all other Electro-Magnetic Machines. The inventor has made an improvement by which the primary and secondary currents are united. The cures performed by this instrument now are, in some instances, almost incredible. For proof of this I refer to my new work lately issued from the press, under the title of "The Medical Application of Electric Magnetism." Mail edition, 25 cents. Postage, 6 cents. The Torpedo Magnetic Machines are put up in neat rosewood cases of a very portable size. Price, $12. To agents they are put at $9. Post-masters, Druggists, Store-keepers, and all who are willing to be instrumental in relieving the sick, are respectfully invited to act as agents. They can be sent by Express to any part of the Union. Remittances for a single Machine may be sent by mail at my risk, if the Postmaster's receipt for the money be taken. When several are ordered, a draft or check of deposit should be sent. All letters to be post-paid. I would inform the public that my Operating Rooms are open daily for applying the Electro-Magnetic Machine to the sick. Those who prefer it can send the pay to either of the Express Offices in Wall-street, who will procure the Machine of me for them, and forward it on. Address SAMUEL B. SMITH, 297½ Broadway, New York.

Orders for these Machines received by FOWLERS AND WELLS, 131 Nassau-street, New York.—Feb. tf.